

# THE AMERICAN PSYCHOLOGIST

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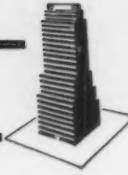
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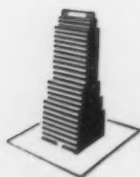
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# THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

Volume 9

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# THE PSYCHOLOGIST AND WORLD AFFAIRS

JOHN R. REES<sup>1</sup>

*World Federation for Mental Health*

IT cannot, I fear, be assumed that social scientists—even psychologists—are always concerned with their potential contributions to community affairs, and perhaps still less to world affairs. On the whole, professional training tends to focus interest on the day-to-day problems of teaching or of research in our own scientific field, or to the applications of our work and skill to local situations, be they industrial, educational, or social. It is, I believe, true, on the other hand, that those who follow the many specialties within psychology give more interest and make wiser contributions to the solution of national and world problems than any other group of social scientists. Psychologists' work with the World Federation for Mental Health is an example.

From its beginning, when Unesco and the World Health Organization urged the establishment of a new and more active body to take the place of the old International Committee on Mental Hygiene, the Federation—of which the American Psychological Association was one of the founders—has been deliberately interprofessional. We have always felt that while matters of therapy were largely concerns for psychiatrists, the understanding and the organization necessary to encourage positive health was something which concerned a wide group of professions, all of whom bring their own specific contributions to the study of personality and human conduct. Because, in many of the forty-one countries with which at present we are linked, our member societies are often run by psychiatrists, there has been from the beginning a tendency to elect too many of them to office. Consequently, at the first meeting of the Executive Board in 1948 it was decided to establish an Inter-

professional Advisory Committee which would be primarily composed of professions other than the medical, which would function as the "scientific conscience" and the policy-planning committee for the Federation, and whose members would always be welcome to work with the Executive Board, in addition to holding their own meetings.

Up to a point, that has worked well. The main difficulty has been that owing to the problem of getting adequate finance for the Federation, it has been hard to bring professional men and women together at regular intervals, since clearly for the most part they cannot often afford to travel long distances on professional salaries.

Despite financial limitations, the Federation has, during the five years of its life, accomplished a number of things of value. More of our interest has gone into the question of preventive work than into considerations of problems of treatment. It is natural that this should be so, because in these days, when we have to consider the situation of all our neighbor countries throughout the world, it becomes obvious how hard it is to deal effectively with some of their health problems on a short-term basis, and that often the important thing is to take a long-term view and work for prophylaxis. The Indian subcontinent, with 400 million people and less than 100 psychiatrists and probably not many more psychologists, cannot realistically be expected in the near future to provide adequate treatment facilities for all those who are in need. So far as it is known, the situation for the 600 million of China is even less favorable than it is in India. Therefore it becomes a matter of first priority to attempt to get as much scientific knowledge as possible of the basic facts in the causation of personality disorders and mental illness. Until we know much more about these and the cultural variations, it is going to be extremely difficult to suggest the social action that might be taken or the measures that might be invoked to enable the children of the next generation to grow up more resistant to the emotional and environmental stresses which might lead to ill-health.

<sup>1</sup> Dr. Rees is a British psychiatrist who for many years has worked closely with psychologists as director of the Tavistock Clinic, London, and then as consulting psychiatrist to the British Army (1939-1945) when he took the professional lead in the introduction of selection and morale services, and in bringing psychologists into their proper responsibilities in the Army. At present he is director of the World Federation for Mental Health.



In addition, much work has been put in on the question of possible contributions to the solution of wider problems of countries, of international bodies, and of the United Nations. The fact that we have consultative status with the Economic and Social Council, with Unesco, with the World Health Organization, and the UN Children's Fund means that we can send observers to their meetings. There is evidence that the attendance of such observers and their occasional participation and intervention in meetings, and still more perhaps their personal contacts with delegates, have produced some change in the general climate of opinion and in the attitudes taken toward the contribution of the social scientist.

There is a two-way traffic here. All of these bodies may refer specific problems to us, and we seek to get the most appropriate help from our membership in dealing with their questions. We, on the other hand, can forward ideas which originate in any part of the Federation and get them considered at this international governmental level. Discussions on problems of technical assistance, the selection and briefing of experts, and the situations which arise and make either for success or failure of technical missions, have been discussed on a number of occasions in small conferences with UN and technical assistance secretariats. We were commissioned by Unesco to produce a working document on certain aspects of these problems, and *Cultural Patterns and Technical Change*, written by a team of workers in the United States and edited by Margaret Mead, was produced. We have taken part in the discussions on the technique and difficulties of international conferences, and arranged for the observation by experts in group dynamics—psychiatrists and others—of one of our own international annual meetings, as a contribution to the conference study of Unesco. We have collected and collated for the World Health Organization facts from all over the world on matters of training, treatment, and prophylaxis.

At the Federation's suggestion, a small expert group was called together, financed by a foundation, to work for the Secretary-General of United Nations on some of the personnel and morale problems with which they are faced.

We have done our share with other international nongovernmental organizations in improving the methods of consultation between these organizations

and governmental organizations. Especially in the Unesco group, extremely interesting and valuable experiments in discussion with the Secretariat on the shaping of their program at a very early stage have been undertaken. It seems possible that these experiments in consultation, if they continue to be successful, may well stimulate similar relationships on a national basis between professional societies and the administrators who plan the policies of governments.

It was, we understand, a suggestion from our Advisory Committee which led to the holding of Unesco's European Conference on "Education and Mental Health in Schools." A number of discussion groups in various countries are still continuing to work on this same theme.

The techniques of group discussion have been a major concern of the Federation, and the especially difficult problems of international and inter-professional communication have occupied us at annual meetings. Many experiments have been made to produce effective participation, and with some success. We hope to explore the possibilities of modifying such methods for different cultural groups, and there is much experimental work in this field waiting to be undertaken.

It is natural that in organizing small conferences the use of group methods, which originated in the United States and the United Kingdom, should be introduced, and we have had some notable examples of their value. We held a series of four conferences on "Health and Human Relations in Germany," and this method of free discussions—so very much the opposite of the old didactic and authoritarian methods of teaching to which many people in Europe have been accustomed—demonstrated its value. After the last of these conferences in Germany no fewer than eight spontaneous groups came together in various areas, all of them working on different problems, but in a similar fashion; this experiment may in fact lead to the establishment of a real mental health movement in that country.

We have for several years been anxious to see the establishment of international institutes for research and teaching in mental health, and, indeed, have had considerable discussions about this problem with one of the North American universities. As a pilot experiment in learning, the Federation, with the assistance of the World Health Organization and Unesco, held an international seminar on "Mental Health and Infant Development" two



years ago, which was very successful. The participants were people who were teachers of others—psychologists, child psychiatrists, public health people, educators, pediatricians, etc. We know that this particular seminar was productive, because many of those who took part are now engaged much more actively than before in work of a similar kind in their own countries.

Some of us in the Federation have taken part in a different type of seminar—for members of the foreign service of various countries, arranged by the American Friends Service Committee. These seminars were extremely effective, and it was interesting to note that the contributions of the social psychologists and the psychiatrists who were on the faculty were especially welcomed by these groups of diplomats.

One could continue listing the activities that the Federation has undertaken in its five years of life, but space forbids, and those who would like to know more are referred to its Annual Reports for 1952 and 1953.

If we turn to the task of outlining the program of the Federation, we are inevitably faced by uncertainties, because however good its policies may be, it is impossible adequately to implement them in the absence of funds.

The Federation aims to extend its program of teaching seminars in various parts of the world where they are demanded and to arrange for more consultant visits to member societies to stimulate interest and bring people of different professions and viewpoints together in joint activity for the understanding and solution of our problems.

We are planning, hopefully, to arrange for experiments in the comparative survey of the cultural differences with regard to psychological ill-health, treatment, and prophylaxis. We hope to encourage better training and specialized education in the various social sciences throughout the world.

We feel that the approach to students is of fundamental importance, since from the universities of the world come a very large proportion of those who are going to carry the major responsibility for their country's affairs and international relationships. Consequently we wish to stimulate interest in work for student mental health, which is very little carried on outside North America.

Primarily we need to know more of the basic facts, and we should lose no opportunity of urging

those who, from whatever profession they come, are concerned with human beings and their lack of stability to provide more data about the etiology of maladjustment and breakdown. We are concerned not only with those who are overtly sick, but with those in the near-normal group, many of whom in fact are in positions of responsibility where they can sway for good or for ill the affairs of their countries or of the world.

An interesting illustration of social action for mental health occurred on the third day after the recent flood disaster in the Netherlands. The Dutch Ministry of Health telephoned the Professor of Social Medicine in Amsterdam (who was also the president of the Dutch Federation for Mental Health) and asked his opinion about what should be done with the very large number of children who were in the evacuation. Offers had been received from all the neighboring countries to take these children, and the Government wished to be certain whether or not they were right in accepting these invitations. The advice, promptly given, was that in view of (a) the experience acquired during the wartime evacuations in Britain, and (b) the work on the effects of separation of small children from the security of their families, which has recently been brought together by the World Health Organization, it would be a very unwise thing to allow the children to be separated from their families, however difficult the conditions of life. This advice was taken (which is reassuring) and the follow-up to find whether, in fact, it was wise and valid advice is at present almost completed.

A further instance is provided by an episode in the Assembly of one of the United Nations Specialized Agencies, where a violent attack had been launched by delegates of two of the Eastern European countries on one of the Western countries. Fortunately that year our Federation had urged people in many countries to make an effort to see that a social scientist was included in as many as possible of the official governmental delegations, and a number of delegations had brought social scientists of varying professions. A psychiatrist who was in the delegation of the country attacked, hearing in the early morning the rather forceful "tit-for-tat" reply that had been drafted, protested that if he had a patient in his office who was aggressive to him, he would certainly not be aggressive in return. He was so convincing that



he was asked to redraft the speech for the leader of his delegation. As a result, the speech as given was a tolerant, wise, and friendly one, which met the various points insofar as they could be met. The whole atmosphere of the Assembly was improved, and the standing of the country concerned was immeasurably raised.

These may be said to be fortuitous instances. They certainly were fortunate. We clearly need, however, to have more people in the right place at the right time who can take wise action of this kind. We in the social sciences, with a sense of vocation which will take us into the official and the international fields, have a better chance of providing this kind of contribution toward the solution of health problems and international tension than any other group of people.

In order to do so, however, we have to "learn the job," to be humble, and to have the wisdom to admit that in a large proportion of the cases

we do not know the answer to the questions we may be asked. If our work is in schools, in industry, or in the services, we have to spend much time learning and observing before we can play a useful role. Public affairs, as a field for our work, differs from these other areas of interest only in that it presents far greater difficulties and responsibilities.

It was during a discussion in the General Conference of Unesco on one occasion after Piaget had been speaking, that an Assistant Director of United Nations, passing my seat, leaned across and whispered: "I begin to have some hope that the social sciences may perhaps yet save us from the natural sciences." That idea is one which may well be kept in our minds; and the American Psychological Association, as the largest national group of psychologists in the world, might take it as a challenge to their thought and action.

*Received April 5, 1954.*



# UNDERSTANDING PSYCHIATRISTS

RICHARD L. JENKINS<sup>1</sup>

*Washington, D. C.*

PROBABLY no one would suggest that the development of the profession of psychology reduces the public need for the medical profession. These professions are and should be complementary, rather than competing. It is clear, however, that there is presently a considerable lack of agreement, particularly between physicians specializing in psychiatry and psychologists specializing in the clinical field, concerning their respective roles in the area in which their activities tend to overlap. It is very significant that where psychiatrists and clinical psychologists actually work together, active cooperation and attitudes of mutual respect are generally established. The more actively competitive and partisan attitudes are typically shown by those psychiatrists and clinical psychologists who do not work in any collaborative relationship with members of the other profession.

Conflict is the most destructive way of settling differences, and this is particularly true of conflict between two important professions. Conflict tends to result in a public loss of confidence in both professions—a result very unfortunate for those who need the services of either. It is incumbent upon both professions to seek a basis for understanding. Knowledge by each not only of the viewpoint of the other, but also some knowledge of the factors shaping that viewpoint, is important if an understanding is to be reached. The purpose of this article is to endeavor to describe for the psychologist some of the elements which have determined the thinking of psychiatrists.

Psychiatrists are basically human, although some may regard this estimate as more than fair. But they have a certain range of emotionally important experiences in common. The psychiatrist is a physician, and while some of his attitudes typically have been determined by his specialty, more of them are likely to have been determined by his

profession. Elements which are emotionally important to a profession tend to become embodied in its thinking. Such is the concept of medical responsibility in relation to the diagnosis and the treatment of illness.

I have heard psychologists protest that physicians carry no special kind of responsibility which is different from that carried by other citizens, for each man is responsible for his own conduct. Philosophically, it is, of course, true that each of us constantly carries a responsibility for his conduct. This philosophical truth has little to do with the fact that certain emergency situations experienced by all physicians have a profound effect on the psychology of psychiatrists. Most psychiatrists, during the period of their hospital training, have served, to some extent, as members of a surgical team, and have experienced within themselves the tremendous emotional pressure toward precision performance in perfect teamwork under the leadership of the surgeon which is a part of medical training. Each member of the team is, to be sure, responsible for his own performance, but there is never question in anyone's mind about the final responsibility of the surgeon, or about his professional right to make, for the whole of the surgical team, the professional decisions he deems necessary to fulfil that responsibility.

This experience with grave and clearly allocated professional responsibility is repeated throughout medical training and medical practice, even when the immediate urgency of the situation does not reach the dramatic level of the operating room performance. This common experience in the training of a physician deeply colors his attitude toward his profession and toward those who practice it. A long battle was fought to establish the acceptance in our society of the concept of medical responsibility, and to keep administrative responsibility in hospital or service from overriding it in professional areas. Medical emergencies are not infrequent. The immediate issue of life or death etches the concept of medical responsibility indelibly on the participant. Nor are comparable emergencies

<sup>1</sup> Richard L. Jenkins, M.D., is a member of the Committee on Clinical Psychology of the American Psychiatric Association. This article is not a statement by that Committee or Association but represents his personal effort to interpret the psychiatric specialty to psychologists.



unknown in psychiatry, for they occur, for example, in relation to risks of suicide, tendencies toward homicide, and in the normal course of such psychiatric treatments as insulin coma.

A further important influence on medical thinking are the direct and indirect results of the fact that when one is ill, he is in a dependent and even a helpless position. His profound need for confidence that his physician knows what to do is a powerful stimulus toward the physician's assuming an authoritative attitude. The fact that the patient's illness is incurable or that the outlook is hopeless in no way diminishes the obligation of the physician. The patient must not be abandoned. What can be done to alleviate suffering must be done. This is so well recognized an obligation that the acceptance of a case by a physician immediately places a legal as well as a moral claim on his services.

The physician, as he has experience with the intense emotional need of the severely ill patient, is thereby influenced in the attitude he develops toward the question of assuming responsibility for meeting that need. He is sharply aware of when he has assumed such responsibility, and when he has not. The obligation is no inconsequential one, and when he assumes it, he tends automatically to assume also the prerogative of making the professional decisions regarding diagnosis and treatment in the case. This assumption of responsibility is a fact of the professional relation of the physician to the patient who has come to him and is not dependent upon the physician's relative status within the medical profession. When the general practitioner calls in a distinguished consultant, the responsibility for the diagnosis and treatment of the patient remains specifically with the general practitioner, not with the consultant, although the latter is, of course, responsible for his consultant advice.

It is with the background of such professional relationships that psychiatrists come in contact with psychologists undertaking psychotherapy. If the treatment of those who are ill takes place within the medical setting, the hospital or clinic, no serious problem of relationships is likely to arise. The diagnostic procedures of the psychologist, like those of the clinical laboratory or the X-ray department, are used by the physician immediately responsible for the patient. This physician must decide what weight to give to these reports in arriving at a

diagnosis, and he must decide upon a course of treatment. This may be psychotherapy. The conduct of psychotherapy is a highly skilled treatment technique. Most psychiatrists agree that the acquisition of skill in psychotherapy is not dependent specifically upon medical training. They believe, however, that he who assumes responsibility for the diagnosis and treatment of illness should have medical training, and that when psychologists or social workers undertake psychotherapy, it should be under the responsibility of physicians, because diagnosis and the planning of treatment are continuing processes, and both soma and psyche are involved. The medical position is that the mastery of a treatment technique, however complicated, does not qualify one for independent practice in a medical area.

Thus, psychiatrists are likely to regard the clinical psychologists who engage in the independent practice of psychotherapy as seeking to practice psychiatry without a license, while these psychologists may regard psychiatrists as seeking to preserve an unjustified monopoly and to impose nonfunctional restraints on a profession which should be autonomous.

In any area in which thinking becomes emotionalized, it is likely also to become foggy, and all of us of the human race are likely to react in accustomed ways to a situation which may call for new responses. Knowledge, furthermore, is often limited. Psychiatrists are likely to have little contact with psychologists, other than in the clinical field. As they become acquainted with what psychologists are doing in other areas, they recognize these may involve functions quite far removed from the practice of medicine. As they work with psychologists in the clinical area, most of them readily learn to make use of the contribution of the psychologist to diagnosis. In situations where the assistance of psychologists is needed in treatment they are, as a rule, quite ready to make full use of their contributions, although they believe this must be done under medical responsibility.

Furthermore, psychologists often do not recognize that the psychiatrist's insistence on medical control is largely a result of his sense of medical responsibility for the welfare of patients. If a psychiatrist is tempted out of the area he actively defends as his medical responsibility, he may be found to be surprisingly modest and unassuming. Most psychiatrists are quite willing to recognize



areas of necessary and appropriate psychiatric collaboration without psychiatric control. Such situations may occur either with respect to problems not specifically defined by the psychiatrists as medical or not involved with assuming the treatment responsibility of the physician-patient relationship. Such situations occur when psychiatrists are used in screening procedures for some purpose other than recognizing present illness, or for planning with respect to the treatment of problems not definable as illness—as in a question of the best decision with respect to a student who is referred by the dean of a university because of misconduct and who is found not to be psychiatrically ill.

As one moves out of the traditional problems of illness to the area of problems of behavior not regarded as illness, the situation becomes more complicated. One aspect of this problem I discussed in an address to the psychiatric profession as follows:

Society divided its population into 2 categories, the sane and the insane. The insane were described as bereft of reason, mad, moon-struck, or afflicted with lunacy. It was recognized that, since they were obviously not capable of a rational moral choice, the application of the punitive sanctions of the law was unjust and unwarranted. The psychiatrist's success with those considered insane, while leaving much to be desired, was such as to give him a new grip on the understanding and control of human behavior. Gradually he began to find that the methods he worked out with the insane were applicable and needful with many persons who had disturbances not reaching the level of insanity. At this point he began to expand his field by taking responsibility for the management of less and less deviant problems of behavior. His degree of success with these has been greater than with the extremely deviant. But as he has dealt with the less and less deviant personalities, he has dealt with personalities whose capacity to respond to the traditional sanctions of social control is less and less impaired. Consequently, he has moved into an area in which the applicability of, or need for, his special approach is more and more subject to challenge, and indeed is more and more challenged.

Psychiatry had at this point 2 choices. The psychiatrist needed to decide whether to restrict himself to the areas where he could maintain his authoritative position as the only person capable of having an opinion, and to remain the monarch of the mental hospital, or frankly to enter the larger community. To do the latter, he needed to recognize that others might be entitled to opinions. He needed to go democratic, to be willing to collaborate, to discuss on an equal footing, and to seek to be a contributor to human decisions, rather than an authoritative arbiter of human destiny. The psychiatrist chose to enter the community, but he seems not yet fully to have adapted himself to the change. Often he hankers for the symbols of

authority. He may secure in the eyes of his conflicted and maladjusted patient in the community a position as final authority, but if his patient comes into conflict in the community, this view is not likely to be shared by the policeman or the judge. They will probably hold that the patient must come to terms with non-medical civilian authority or go to the particular bailiwick of the psychiatrist—the mental hospital.<sup>1</sup>

The psychiatrist, as he moved out of the mental hospital and into the community, joined forces with the clinical psychologist and the social worker to form the clinical team. This meeting may have given added impetus to the movement of other clinical psychologists away from studying normal function toward dealing with disordered function and mental illness. The difference of direction of professional evolution contributes to the fact that many problems which the psychiatrist will regard as illness, the psychologist may regard as learning problems.

Any effort to divide the ill person into soma and psyche and to assign only the former to medicine and the latter to psychology will be bitterly resisted by psychiatrists, and properly so, for it would rob the public of the fruits of the long struggle to recognize that unity of the patient which the hybrid word "psychosomatic" was coined to cover. To segment the patient again in the old body-mind dichotomy would set the clock back immeasurably. The mere fact of the problems of diagnosis and of treatment in the psychosomatic and somatopsychic areas, if one may coin such a term, makes it bad public policy seriously to consider the establishment of two healing professions—one related to the soma and the other to the psyche.

We can recognize a wide range of problems of adjustment that do not constitute illness by any reasonable definition and are closer to nonmedical problems of learning or of vocational or social adjustment than to medicine. We have perplexities about our jobs. To some extent, we all have problems of learning. We all have problems of social relationships. We all have anxieties in our daily living, and the mere presence of a measure of anxiety does not determine illness. When, however, the anxiety results in gross anxiety attacks, or in definite conversion symptoms, or in a schizophrenic break, then I believe that the judgment of the lay public—the final arbiter in a democracy—will be

<sup>1</sup> JENKINS, RICHARD L. Psychiatry at the crossroads. *Amer. J. Psychiat.*, 1949, 106, 358-361.



that the person is ill, and the problem has become a medical one. The problem may still in a sense be a problem of learning, but at the point a learning problem clearly results in illness, its medical aspects take precedence.

If the psychological profession, which recognizes the responsibility of the medical profession for somatic illness, will also recognize the implications of the inseparability of the problems of somatic and psychic illness (in that somatic causes may give rise to psychological symptoms and psychological causes may give rise to somatic symptoms) then a possible basis for an interprofessional understanding exists, for while illness is a medical matter, many other problems fall rather into educational or social categories. Psychiatrists may make contributions in these latter areas, but their profession gives them no claim to any special responsibility in such areas. There is bound to be a rather broad gray or

marginal zone. Our respective backgrounds and direction of evolution probably make inevitable a certain amount of border skirmishing along our necessarily rather ill-defined common frontiers. Probably few psychiatrists will become very disturbed about that and I hope not many psychologists will. On the other hand, any attempt by psychologists to take over the diagnosis and treatment of psychiatric disorders or specifically of functional psychiatric disorders generally is bound to be regarded by the psychiatric specialty as a basic challenge to its function—as of course it is—and will surely lead to a major professional struggle between psychology and the whole of medicine. Such a struggle will not be in the interests of either psychiatry or psychology, and certainly least of all in the interest of the general public.

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## THE ROLE OF PSYCHOLOGY IN ONR

H. E. PAGE

*Office of Naval Research*<sup>1</sup>

ONR has both immediate and long-range interests in psychology as a field for research support. This is true for the other defense agencies as well. With few exceptions, e.g., the Navy's interest in submarines and the Air Force and Navy's interest in high altitude and the effects of *g*, the three services are interested in the same aspects of psychological research. This is both understandable and reasonable since manpower utilization is a common denominator to all.

It is easier to gain agreement as to what parts of psychology are important to the services than to indicate areas of no concern. Obviously there are areas, e.g., comparative and child psychology, where the immediate implications for the Navy are difficult to see. Even here, however, one could argue about the long-term contributions which investigators in these fields might make. It is still true that little of a systematic nature is known of man's behavior and we have yet to learn how to translate such knowledge as we do have into fully effective policies for governing his utilization. The Navy's interests in better understanding man and how to use him effectively may be outlined as follows.

*Transitional problems from civilian to military life.* The very basis of proper manpower utilization is found in the inventorying of man's knowledge, skills, and capacities. Research in this area encompasses an exhaustive knowledge of individual differences and the development of methods and techniques to isolate them. Research includes the study of intellectual, personality, sensory and motor skills and aptitudes, as well as studies aimed at the application of knowledge concerning them for predictive purposes.

*Military training.* ONR is interested in immediate and long-range aspects of training research because the accomplishment of the Navy mission is greatly dependent on the adequacy of such training. This calls for the support of research on the

Navy's organizational structure and the development of techniques to permit the matching of sensory, intellectual, personal, and physical capacities and limitations of individuals to the job at hand. Also called for is a study of the learning process and a knowledge of transfer effects, since they hold the key to convertability of skills from civilian to military life and from one form of military duty to another. It means a study of the acquisition of knowledge and skills, their deterioration, and the place of training aids, simulators, and devices both in their acquisition and maintenance.

*Human engineering.* Whenever there is a human link in a machine or weapon system the errors of the machine are amplified by human errors. ONR's interest here is threefold: (a) application of available knowledge to the design of equipment being currently developed; (b) development, including design and construction, of devices to determine basic principles of human engineering as well as the preparation of guides, handbooks, and visual aids to demonstrate these principles; and (c) research on sensory capacities, movement ability, capacity for team effort, stress, accidents—in fact, the whole area of applied experimental psychology.

*Utilization of manpower.* The selection, classification, training, and assignment of men constitute only one part of the problem of utilization, and from a research standpoint the part where most definitive answers may be found. Much more difficult is the problem of making practical assessments of behavioral effectiveness. On the one hand, this means continuing research on evaluative instruments and techniques. On the other hand, it means research on the more subtle aspects of the situation which make for effective or ineffective behavior on the part of individuals and groups. The organization and composition of the group, incentives, leader-follower relations, intra- and intergroup communications, homogeneity, attitudes, social maladjustment—in fact, the whole realm of that area which has come to be known as human

<sup>1</sup> The opinions and assertions in this paper are those of the writer and are not to be construed as official or reflecting the views of the Defense Agencies.



relations—are important to man's effective use and therefore to ONR.

These areas just described receive research support from ONR. Some are definitely applied, as in the human engineering area, others are basic but stand good chance of immediate payoff. Still others, as those mentioned in the area of utilization, hold real potential for utility in the Navy, but their application depends in part on the development of research methodology itself.

Now that the areas of general interest have been delineated, there are several questions that might be asked. For example: "How does ONR support such a research program?" "How extensively, and what are some of the specific researches undertaken?" Let us answer these questions.

The Office of Naval Research supports research through contracts with universities and profit and nonprofit research agencies. In addition, it supports "in service" laboratories, e.g., the Naval Research Laboratory and the Special Devices Center. These laboratories may also support research through contracts with other agencies.

The extent of the Psychological Sciences Research program is indicated in terms of the number of contracts in existence. Currently (April 1954) there are 117 contracts located at 58 colleges, universities, and research organizations. In addition there are several psychologists working in "in service" laboratories on problems of human engineering and training aids and devices.

Merely stating the number of research contracts in existence and indicating the broad areas of research interest fail to give a sufficiently clear concept of just what is being "researched." A look at some of the areas of research in greater detail with a few examples of ongoing research should give a clearer picture of the size and scope of the program.

Research interests described earlier under four headings are implemented by 13 major projects, each of which has numerous research tasks under it. Following is a brief statement indicating research interests in these areas and examples of specific research in each.

#### *Isolation and Measurement of Basic Psychological Traits*

Research in this area is pointed toward furthering fundamental knowledge of physical, intellectual,

and personality traits. The objectives are to broaden existing information concerning intellectual functions in areas such as verbal, numerical, spatial, and mechanical abilities; to isolate and measure basic variables in ability areas such as reasoning, productive thinking, and judgmental behavior; and to extend our knowledge of and techniques for measuring personality and other nonintellectual aspects of behavior.

The tasks listed below are typical of research in this area. The principal investigator and his institution are given in parentheses.

*Aptitudes of High-Level Personnel* (J. P. Guilford, University of Southern California). This study involves the development of techniques for defining and measuring the higher level abilities not covered by the usual psychometric devices. Included are such psychological areas as: (a) reasoning, (b) creative thinking, (c) evaluation, including judgment, and (d) planning. The purpose is to isolate and define various abilities in these areas by means of factor analytic techniques and to explore the extent to which each ability relates to success in occupations where such high-level skills are required.

*Studies of Problem Solving and Thinking* (Donald W. Taylor, Stanford University). This is an experimental exploration of the higher mental processes of problem solving and thinking. Among the studies undertaken are: (a) differentiation of good and poor reasoners, (b) the effects of success and failure upon later problem solving, (c) the effect of interruption upon achievement in problem solving, and (d) the relationship between the ability to remember isolated items and the ability to solve new, difficult problems.

*Information Theory for Psychometric Analysis* (Lee J. Cronbach, University of Illinois). The general aim is to explore the implications of information theory for psychological testing, to provide an internally consistent model for evaluating tests, and to develop procedures for applying the model to problems of test selection. It is anticipated that this effort will make some of the assumptions underlying test construction more explicit and will make it possible to develop sounder specifications for tests.

#### *Selection and Classification Problems*

The Navy is constantly confronted with two general types of selection and classification problems at all levels from recruit to commissioned officer: (a) deciding who, from among a group of applicants, is best fitted for a particular job, and (b) deciding to which of two or more job or training-program categories a given individual is to be



assigned. It is from this situation that the importance of research aimed at the development of efficient screening devices stems.

The following research tasks are examples of the research effort in this area.

*Submarine Personnel Selection* (Clark L. Wilson, Management & Marketing Research Corporation). Research on problems of selecting and training submarine personnel is involved. This study includes development of measures of adjustment to submarine life and a series of supplementary studies designed to support the current work of the Medical Research Laboratory, New London, Connecticut, in this area.

*Techniques in Differential Prediction* (Paul Horst, University of Washington). This is a program of basic research in psychometrics, the general purpose of which is to develop improved techniques for predicting differentially the success of persons in each of a possible number of important activities, i.e., to develop ways of selecting, from a larger number of tests, that battery which will yield the optimal differential prediction.

*Measurement of Interest Patterns of Enlisted Naval Personnel* (Kenneth E. Clark, University of Minnesota). In this task, a Vocational Interest Inventory is being developed that will provide an objective and quantitative measure of the interests of naval enlisted personnel. Special scoring keys are being developed for different Navy rates.

#### *Billet Analysis and Billet Classification*

Training curriculum development and job classifications are dependent upon current and accurate billet analyses and billet classification research.

This research utilizes observation, interviews, and allied techniques to develop in detail the duties and responsibilities of a billet, the capabilities and requirements for a billet, and the extent to which there is overlapping among billets in terms of duties, skills, and required knowledge.

The following two tasks are examples of the research program in this area. The Bureau of Personnel has been supporting this research through the Office of Naval Research.

*Billet Analyses for Guided Missiles Personnel* (John C. Flanagan, American Institute for Research). This study provides a systematic program of personnel research to provide data applicable to selection and training; to develop job codes, rating structures, and promotion qualifications; and to establish standards of proficiency for guided missile personnel.

*Personnel Studies in Mine Warfare* (Harry J. Older, Psychological Research Associates). Personnel re-

search in mine warfare is undertaken to (a) develop billet specifications for officer and enlisted billets, (b) define measures of performance, (c) make recommendations for selection standards, and (d) make recommendations concerning training for mine warfare.

#### *Psychophysiology of Sensory Mechanisms*

A systematic accumulation of scientific data on the sensitivity characteristics of sense organ receptors and on the conductive and integrative functions of the nervous system is essential to military selection, training, and placement for maximum utilization of available manpower. This project includes studies of dimensions of receptivity of sense organs, their neural mechanisms, and the neuroanatomical tracts in the peripheral and central nervous systems. The studies provide data concerning the constant and variable factors of receptor system sensitivity as well as of the subsequent response system.

The following statements concerning four research tasks are indicative of the research in this area.

*The Frequency-of-Seeing Probability in Ultra Short Stimuli Exposures* (W. J. Crozier, Harvard University). This study will determine the chances that variously colored visual targets will be seen by the human eye under conditions of short exposure times, and while the subject is breathing various percentage combinations of air and oxygen.

*Visual Inhibitory Mechanisms* (Floyd Ratliff, Harvard University). It is well known that the very structure of the human eye produces blurred images on the light-sensitive membrane. Nevertheless, humans can still discriminate exceptionally well between various patterns, shapes, and intensities of visual targets. An attempt is made to explain this apparent discrepancy by the effect of stimulating one small area of the light-sensitive membrane upon the response to stimulation of an adjacent area.

*Physiological Acoustics* (Hallowell Davis, Central Institute for the Deaf). This investigator is studying the acoustical characteristics of the ear, including the physical transfer of energy and the electrical and nervous processes in the sensory membrane. In addition, studies are being conducted on the causal relationship of intense sounds to ear injury and hearing losses, and on the development of techniques and devices for several types of acoustic measurement used in the selection, training, and medical treatment of naval personnel.

*Cutaneous Mediation of Vibratory Forces* (F. A. Geldard, University of Virginia). This is a study of



the response characteristics of the human skin to mechanical and electrical stimulation in order to determine the feasibility of using vibrational patterns on the skin surface as a method of communication auxiliary to vision and hearing.

#### *Problems of Perception and Orientation in Space*

Modern warfare operations impose new and severe demands upon the perceptual capacities of personnel. Complex visual and auditory signals, instruments and dials, and the necessity to identify objects at long range call for perceptual acuity of a high order. In addition, high speeds of aircraft accentuate problems of perception and orientation in surrounding space. Continuing research in human perception and space orientation thus becomes increasingly important.

The research of Ludvigh, Zegers, Gibson, and Mann is typical of the research interests of ONR in this field.

*Visual and Stereoscopic Acuity for Moving Objects* (E. J. Ludvigh, Kresge Eye Institute). The limits of visual acuity for fast-moving objects as experienced during high-speed flight will be determined. The relationship of visual acuity to judgment of relative angular velocity and acceleration of targets is being studied, and a new test will be developed to improve prediction of performance of naval aviators in detecting moving targets.

*Study of Colored Targets against Colored Backgrounds* (R. T. Zegers, Fordham University). This research involves a systematic study of the best conditions for rapid and accurate response to visual signals when the signal differs from its background in color.

*Visual Perception of Space and Motion* (J. J. Gibson, Cornell University). This is an investigation of visual acuity of spatial and temporal patterns of objects in motion as affected by eye movement, area of surface, type of surface, distance of observation, relative velocity, slant, and relative motion.

*Influence of the Nonauditory Labyrinth on the Effective Function of the Human Organism* (C. W. Mann—Tulane University). Disorientation in space, with special emphasis upon the interplay of vision and equilibrium, is studied by (a) measurement of forces present in the acceleration of aircraft and relating these to human responses, (b) investigation of visual cues which indicate an upright position, (c) measurement of change in perceived vertical introduced by change in direction and strength of force applied to humans, (d) study of relationships between acceleratory and visual factors, (e) study of the effects of varied amounts of angular acceleration on space perception of deaf-mute

subjects as well as normals. The research program is carried out in cooperation with the School of Aviation Medicine, U. S. Naval Air Station, Pensacola, Florida.

#### *Physiological and Psychological Effects of High-Intensity Noise*

The increasing intensity of noise from jet aircraft with after-burners is likely to produce detrimental effects upon launching crews and other flight deck personnel which may jeopardize operations with such aircraft. Voice communications are practically impossible, temporary and permanent deafness does occur, and nonauditory effects such as loss of balance, coordination, and orientation have been observed. It is necessary to determine and measure these biological effects in order to provide effective countermeasures.

A typical example of the research currently supported and planned for in this area is the following.

*Vestibular and Postural Effects of High-Intensity Noise* (H. W. Ades, Emory University). A study of the relationship between the sense of equilibrium on the disorientation, loss of balance, and falling observed in personnel working near jet aircraft is underway. Also involved is an electrophysiological method to study a variety of neural structures during exposure to determine the avenue of bombardment and the resulting effects.

#### *Performance Criteria*

Validation of selection, classification, and training programs is dependent upon techniques for measuring the proficiency of the man's performance on the job. Therefore, job proficiency criteria must be developed to evaluate the effectiveness of these procedures. As equipment requirements change, job proficiency indicators must change. It is necessary to have a continuing research program directed toward a systematic development of criterion measures, and the immediate emphasis should be on the more critical billets. The goal of criterion research is to develop objective measures against which selection, classification, and training procedures can be validated.

The following three examples of research indicate the types of problem under study.

*Posttraining Performance Evaluation in Aviation Ratings* (Elliott R. Danzig, Institute for Research in Human Relations). Criterion measures are being developed which measure the on-the-job proficiency for several aviation rates, and the reliability and validity of the criteria are being determined. Simultaneously



with the study of criterion problems, a comprehensive battery of prediction devices will be administered to groups of aviation rates and validated against the criteria developed.

*Research on Electronics Personnel* (Glenn L. Bryan, University of Southern California). The purpose of this task is to initiate and execute a broad program of research on personnel and training problems as they relate to electronics personnel. The basic data for the study are being collected by shipboard observation of the activities of electronics personnel, including electronics technicians, electronics officers, sonarmen, radarmen, fire control technicians, and radiomen. Collateral research includes a study of group performance in the Combat Information Center, development of tests of electronics trouble-shooting skill, and a series of studies to determine the optimal techniques to use in training electronics personnel for tasks involving complex information displays.

*Measurement of Shipboard Performance Aboard Submarines* (Clark L. Wilson, Management and Marketing Research Corporation). The primary purpose of this task is to establish methods of job sample performance testing. The specific rates for which criteria of proficiency are being developed are Submarine Electrician's Mates and Submarine Enginemen. Predictors of proficiency in these rates are being developed concurrently and administered to trainees at the Submarine School at New London for subsequent validation against the criteria developed. Attempts are being made to identify several of the underlying principles behind the use of job sample tests. Among these are: (a) an investigation of the relationship between performance and written tests, (b) an investigation of the effect the "verbal" individual can exert upon his score, (c) an investigation of the reliability of trouble-shooting tests, and (d) experimental evaluations of new approaches to performance testing.

#### *Neurophysiological Aspects of Performance*

Investigations carried on under this project are concerned with the study of functions of the nervous system and other components of the body in various patterns of behavior, e.g., learning and memory, psychomotor activities, work performance under normal conditions and also under stress, prolonged effort, unusual or unfavorable environments.

The following four examples are typical of research in this area. This research is basic in nature and, with the exception of the effects of drugs on motion sickness, not at this stage readily applicable to Navy problems.

*Predictability of the Behavior of Organisms* (B. F. Skinner, Harvard University). This study includes the

investigation of the chances that a psychological response will be evoked under various conditions of stimulation and reward; intensive analysis of the complex processes involved in the discrimination between various types of stimulation; and a study of the processes of abstraction, generalization, and concept formation.

*The Effects on Behavior of Irritative Lesions and Scar Formation in the Cerebral Cortex* (K. S. Lashley, Yerkes Laboratories of Primate Biology, Inc.). This research involves a study of the effects on behavior, emotional reactions, and intellectual functions of surgically produced lesions in various areas of the brain using a number of surgical techniques. Electrical recording of brain functions before and after damage and detailed microscopic studies of the damaged tissues are made.

*The Role of the Autonomic and Central Nervous Systems in Human Behavior* (R. C. Davis, Indiana University). This is a study of the autonomic nervous system—its function in bringing about behavior described as emotional or reactions to stressful situations—and of the complex interactions between the autonomic nervous systems and the central nervous system.

*Motion Sickness* (G. R. Wendt, University of Rochester). This investigation attempts to determine the nature and effect of physical and personal factors related to motion sickness, including the physical characteristics of wave motion, the vestibular, postural, vascular, temperature, and visual factors, as well as the influence of various drugs upon the reactions obtained.

#### *Individual Effectiveness and Unit Performance*

Most tasks in the Navy are accomplished by groups rather than by individuals. These groups are composed of individuals who see themselves as having some task to perform in the accomplishment of the over-all mission. They may be motivated to lead or to be led, to accept or to reject the objectives of the group. How they perceive their part in the over-all task and how they perceive the tasks of others is important to the accomplishment of this goal. The objective of this project is to improve understanding of the relationships existing between the individual, his motivations and perceptions, and his group in order to permit better selection for, assignment to, and training in the group task. In this project the individual is viewed as the most important variable in the accomplishment of a group task, and the ways in which he can be motivated to make the greatest contribution to the group goal are investigated.



The following research tasks indicate the area of interest in this research. Findings of such research become the basis for developing the screening and measuring instruments described in the preceding sections on *Basic Psychological Traits and Selection and Classification Problems*.

*Motivation and Psychological Stress* (M. H. Applezweig, Connecticut College). This task attempts to relate an individual's response to a stress situation to his pattern of basic motivations. Thus the research will contribute to the explanation of the differing impact of stress on different persons. A test of basic motivations such as need to depend on other people, need for achievement, etc. will be constructed. Individuals with different motivational patterns will then be subjected to various stress situations and their responses related to the motivational scores.

*Conditions Affecting Cooperation* (Morton Deutsch, New York University). By this task, investigations are made of some of the conditions considered to be important in facilitating or reducing cooperative activities in small groups. Variables which will be systematically manipulated are (a) degree of remoteness of a group goal in time, (b) adequacy of members' information about procedures to be followed, (c) likeness of group members' perceptions of the common task, (d) necessity of continuing group cooperation after individual motives are satisfied, (e) necessity of trusting other members in order to reach a certain goal.

*Measurement of Human Needs* (D. C. McClelland, Wesleyan University). In this study chief attention is placed on analysis and measurement of a basic human motivation: the need for achievement. For measurement, the subject is asked to write a brief story about a picture. A scoring system permits totaling the number of achievement ideas expressed. Component elements of the need for achievement (for example, "hope of success" versus "fear of failure") are being analyzed. Experiments are being repeated and the scoring system improved. A test of the achievement motive will be developed.

*Social Group Structure and Morale-Efficiency* (E. F. Gardner, Syracuse University). The central problem in this task is the construction of an improved sociometric instrument for predicting group morale and efficiency. The improved instrument will alter the usual questions asked in such a way that individual status will be related to certain basic human needs. A leader may be preferred, for example, because he appeals to the need for dependence but not to the need for companionship. Different "need" scores will be combined in the morale-efficiency predictor to be developed.

### *Composition and Effectiveness of Organized Units*

This project views the group as the unit for study and proceeds to investigate ways of organizing groups to perform tasks in an effective manner. The researches described below indicate areas in which ONR sees contributions to Navy problems.

*Analysis of Training Processes* (H. A. Thelen, University of Chicago). This task involves working out a method of reliably analyzing and coding the process by which a newly formed discussion group becomes maximally productive. Stages in group development can be identified, and effective development distinguished from ineffective. Also being developed are methods of measuring the tendencies of an individual toward certain forms of group interaction, such as dependence on the leader or desire to pair off with a co-worker rather than to interact with all members. When these predictive instruments have been developed, the composition of discussion groups will be experimentally varied according to the types of group adjustment favored by individual members. It will then be possible to identify the group composition which is associated with highest effectiveness.

*Size as a Determinant of Group Behavior* (B. G. Rosenthal, University of Chicago). The purpose is to determine the relationship between size and productivity of small groups under two basic types of task conditions: (a) those tasks offering an answer which can be checked objectively as right or wrong; (b) those which have no right or wrong answer but depend on a consensus of opinion. Groups will range in size from three to ten persons. Two different kinds of interaction coding, those of Rosenthal and Bales, will be used and compared. Group efficiency will be measured by such means as length of time to finish the tasks and quality of product.

*Factors Leading to Attempted Leadership* (J. K. Hemphill, Ohio State University). The problem of this study is to measure those characteristics of group members, of groups, and of task situations which will predict a given individual's attempts to gain control of a group and his success in these efforts. Small laboratory groups engaged in problem solving will be used. Tasks and selection of participants will be varied so that, for example, some persons will have more knowledge of or ability in the task set the group than will others.

*Group Influence on Members* (Dorwin Cartwright, University of Michigan). This study consists of three related projects investigating the response of individuals to various types of pressure exerted by the remainder of the group or by certain dominant persons. Study 1 investigates the response of an individual to a group



when he enters as a newcomer already holding some opinion divergent from that held by the majority. The experiment will determine to what extent he will change his opinion under different degrees of attraction between himself and the group. Study 2 is designed to measure the degree to which an individual's behavior is changed by his fear of punishment by another person. Degree of open conformity to the other's demands and amount of hidden disobedience will be measured and will be compared. Study 3, using experimental subjects on whom personality and ability measures are already available, provides for the manipulation of task conditions in such a way as to determine the relative weight of ability and personal attractiveness in the achievement of leadership. To attack the problem of persons who have ability but are handicapped by personality defects, devices for improving the participation of such group members will be developed.

#### *Human Factors in Equipment Design and Operation*

The purpose of the research in this area is to discover and to develop principles and techniques of engineering psychology for application in the design and operation of man-machine systems, man-operated gear, and instruments. The objective is to provide the data necessary for production of military equipment that will make maximum use of the operator's skills and conform to his physical and psychological limitations. In the design of man-operated equipment, this involves full consideration of such factors as the sensory capacities, motor skills, bodily strength, physical dimensions, perceptual and mental abilities of the operating personnel.

The researches of Fitts and Garner are examples in this area.

*Display and Signal Pattern Discrimination* (P. M. Fitts, Ohio State University). This is an investigation of problems in the perception of patterns involved in rapid and accurate identification of target information provided by sonar and radar instruments. The general scope of the task includes: (a) determination of ability of individuals to learn to recognize and discriminate different kinds of patterns; (b) analysis of important aspects of visual and auditory patterns which facilitate rapid and accurate recognition; and (c) the effects of content and character of patterns and signals upon the ability of human operators to handle the information.

*Display, Control, and Transmission of Information* (W. R. Garner, Johns Hopkins University). This is a continuing study of the display, control, and transmission of information by means of various experimental

investigations of man-machine interactions, problems of judgment and decision making, group behavior, and applied research on systems procedures.

#### *Training and Education Research*

In peacetime the Navy is largely a training organization. In war, neither conditions nor time is suitable for careful study of training problems. If answers are to be found to such questions as the suitability of the content of training courses for producing effective performance from technical school graduates, how the material is most effectively taught, who the best instructors are, and whether the training has been effective, it is essential that training research be continuously undertaken. There is at present no reliable answer to the problem of how much training courses for such ratings as radioman, radarman, and sonarman can be shortened for mobilization conditions and still retain effectiveness. There is likewise no answer to the very crucial problem of how much time can be allowed to elapse between training and reporting for duty while maintaining proficiency in the area of training. The same can be said in reference to determining the effective length of duty prior to refresher training, and in reference to the critical mobilization problem of how specialized general basic training should be. The answers to these questions, which bear directly upon the administration of very expensive training programs, are obtainable only through research such as the following.

*Functional Military Literacy* (Nicholas A. Fattu, Indiana University). This study is concerned with the marginally literate man in the military training situation. Two general problems are under investigation. Through an analysis of the relationships among aptitude, achievement, and educational experience levels in normal and subnormal groups, information will be provided which will apply to selection and classification problems associated with this group. The second area of investigation is an evaluation of the effectiveness of current programs of training of the marginally literate.

*The Role of Motivation in Learning and Performance* (Kenneth W. Spence, University of Iowa). Aimed at the clarification of the role of motivation in learning and performance, this task approaches its objective through the utilization of experimental situations involving a variety of learning tasks. The tasks include simple reaction time, classical eyelid conditioning, learning pairs of associated words, and a complex motor-



learning task. Motivation is varied by introducing different levels of anxiety in the subjects, varying the amount of instructions given prior to the task, and by manipulating the degree of success or failure experienced by the subjects working at the task.

*Training Needs in Neuropsychiatric Selection* (William A. Hunt, Northwestern University). Under this task a continuing survey is maintained of the training needs in the area of neuropsychiatric selection, and research is initiated in accordance with the actual service needs of the moment. The influence of the judgment factor in diagnosis has been studied, and training in this field has been revised to conform with the findings. Technical guides and manuals have been prepared and a study completed on the costs involved in the utilization of the psychiatrically marginal man. Current work includes research on new guides and procedures and studies of improved techniques for diagnostic testing and for conducting psychiatric interviews.

*Effectiveness in Technical Training* (Wilse B. Webb, Washington University). A series of studies is carried out in collaboration with the Naval Air Technical Training Command with the over-all aim of determining the effectiveness of presently used techniques of training in terms of how much and how easily materials are learned, and if more effective presentation techniques are available. Studies of instructor proficiency, studies of the effect of different kinds of examining techniques, and analysis of the usefulness of the incomplete sentence as a training evaluation device, and the development of a technique of utilizing returnees from the Fleet as a data source in evaluating training curricula, have been accomplished. Other studies in this same general area of research in technical training are currently underway.

*Learning Problems in Sonarmen Training* (Clark L. Wilson, Management & Marketing Research Corporation). This research involves a study of the learning problems of the sonarmen with special emphasis on those involved in classifying the contact made with sonar equipment. The investigators are concerned with the ways in which sonarmen learn the cues for contact classification, and discovery of the best techniques for training in this activity.

#### *Disturbed Psychological States*

Research in this area is aimed at improving both combat and peacetime efficiency by screening out individuals likely to break down while in service, determining appropriate assignments for unstable personnel who can adjust to specialized duty, investigating methods of rehabilitating neuropsychiatric and disciplinary cases, and developing train-

ing techniques to prepare personnel for emotional control under stressful conditions.

The research described below, currently supported in part with funds from other Navy Bureaus, represents areas of such interest.

*Rehabilitation of Naval Disciplinary Offenders* (Douglas Grant, San Francisco State College Foundation). Screening instruments are being developed to identify potential delinquents in the naval recruit population and to pick out those disciplinary offenders who can benefit from retraining. A theory of the psychopathic personality is being developed and used as a basis for the construction of personality inventories. These will be tried out on populations of recruits and naval offenders and only items differentiating between the two groups will be retained. For the final test of the inventories, the experimental groups will be followed up to determine which recruits later became delinquent and which offenders could not be successfully returned to duty. The power of the inventories to identify these individuals can thus be measured.

*New Techniques of Analysis of Psychotic Behavior* (B. F. Skinner, Harvard University). The investigation will apply to psychotic patients a technique developed on animals and children for eliciting simple responses which reveal and possibly even improve various perceptual and motivational processes without the use of verbal communication. A repetitive task, such as putting counters into a candy-vending machine, is used, and rewards are manipulated in such a way that certain perceptual patterns must be learned. Observations on learning and motivational level can thus be made and used for both diagnostic and therapeutic purposes.

The preceding pages have indicated areas of ONR interest in psychological research and provided specific examples of the research program. A rather wide distribution of reports emanating from this research is made to "in service" and selected university laboratories. Copies are filed with the Library of Congress and with each of the Service libraries. Principal investigators frequently have available additional copies for distribution on request. It has been the policy to encourage publication in technical and professional journals and much of the research has appeared in such sources.

Bibliographies of research reports emanating from ONR's contract research program may be obtained by writing to the following address: Director, Psychological Sciences Division, Code 450, Office of Naval Research, Washington 25, D. C.

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## A PLAN FOR INTEGRATED PROGRAMS OF PERSONNEL RESEARCH AND DEVELOPMENT

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*Bureau of Naval Personnel*

PERSONNEL research and development in the Armed Services today has become big business. Several million dollars per year are budgeted for this research effort, and it is carried out by large numbers of psychologists, educators, statisticians, occupational analysts, and other specialized professional personnel. In the Department of Defense the funds for personnel research and development are budgeted essentially by fields of professional specialization in the areas of manpower, selection and classification, human engineering and psychophysiology, training aids, training and education, and human relations and morale. In general, the military personnel research and development activities are organized into departments or branches following these budget categories. This leads to a serious problem of coordinating and integrating the efforts of the various types of research personnel at the working level since the personnel operations problems being supported by the research effort do not often organize themselves along the lines of research specialization. Such problems usually are oriented toward a system of equipments or a category of personnel operations and require an integrated program of research in several fields of specialization. A plan for such integrated programs of personnel research and development has been developed and is being employed by the Personnel Analysis Division of the Bureau of Naval Personnel. This plan is presented here as of possible interest to other governmental or industrial research groups faced with the same problem.

The primary mission of personnel research and development in the Bureau of Naval Personnel is to develop and evaluate procedures, methods, and devices which may be applied by naval personnel administrators to achieve maximum efficiency and economy in their use of the manpower resources available to them. Such end products are necessary first, to determine the exact qualitative and quantitative manpower needs and availability for performing each Navy operation (supported by Billet and Organizational Analysis Research); second, to

identify and assign the right man to each billet (supported by Procurement, Selection and Classification Research); third, to give the man the most effective training (supported by Training and Education Research); and finally to provide the most effective management methods, including morale, incentives, attitudes, and related psychological factors (supported by Management Research). This involves obtaining answers to the following types of questions.

### *Manpower—Billet and Organizational Analysis*

What work is being performed and what is involved in its performance?

What are the minimum physical and nonphysical qualifications required for satisfactory performance?

How should this work be structured into classification systems and career patterns?

What are the minimum qualitative and quantitative manpower requirements to accomplish the operational mission?

How can the Navy make optimum use of current and potential manpower resources without impairment of the effective accomplishment of the naval mission?

What is the best organizational structure for accomplishing the function or mission?

### *Procurement, Selection, and Assignment*

What means can be employed to determine how effectively a man performs in a billet?

How can the important human characteristics essential in the billet be measured?

What is the relative importance of various individual characteristics in determining effective performance in the billet?

How can we match individuals and billets in order to obtain maximum efficiency in the use of available manpower?

### *Training and Education*

What skills, knowledges, and attitudes must be developed in the trainees to assure adequate per-



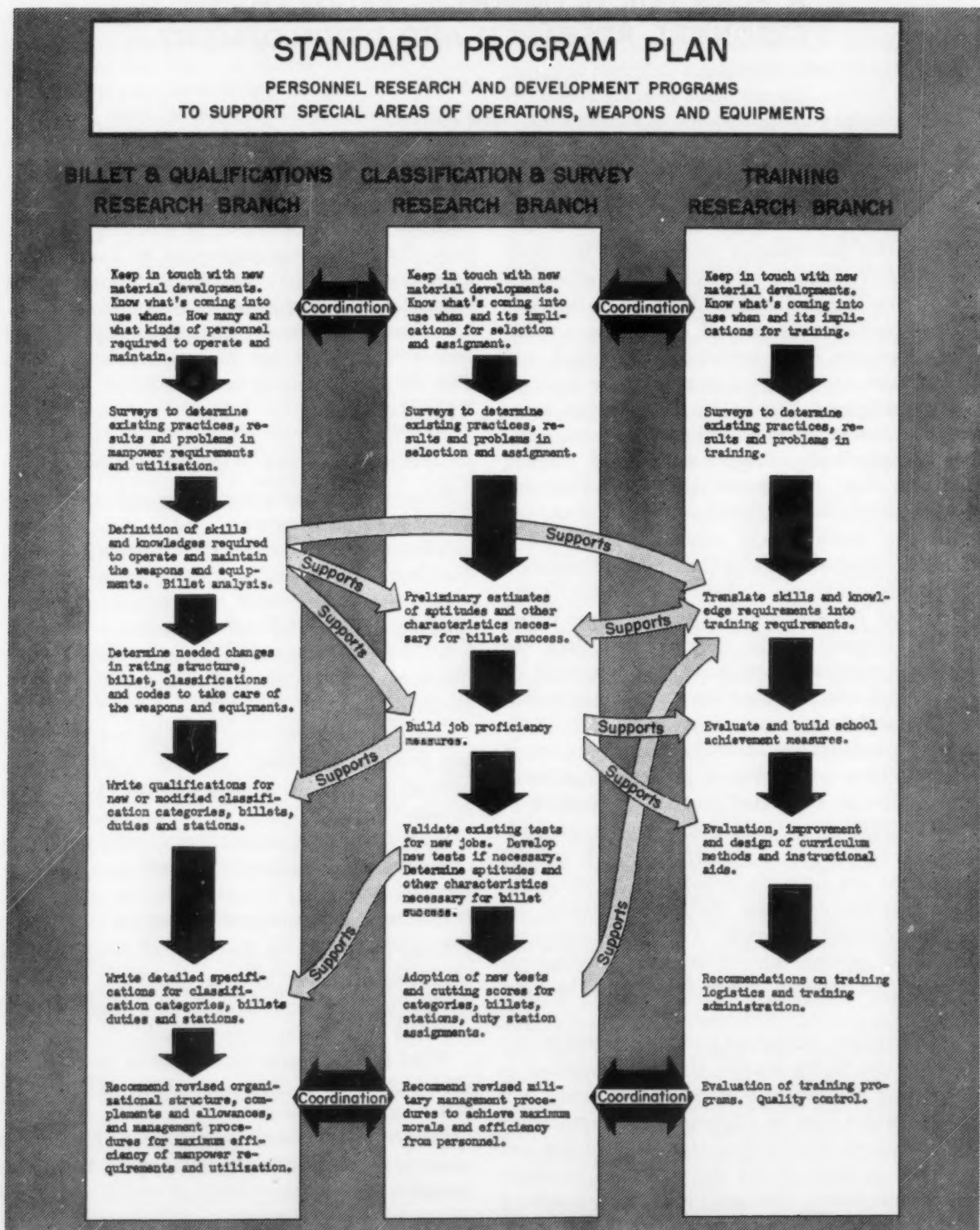


FIG. 1. Standard Program Plan



formance of duty, taking into account the characteristic capabilities and previous training of persons available to be trained?

What program of instruction will be most effective in meeting the requirements; what sequences of instruction and experience should be established; what course content should be included in each phase; what provision should be made for adjusting the program to exceptional trainees; and what methods of instruction are most appropriate to the subject matter and to the abilities and interests of the trainees?

What facilities, equipment, training aids and devices, and instructional materials are needed to support the programs and courses in accordance with the scheduled numerical requirements for trained personnel?

What administrative and supervisory organizations and practices will most economically and effectively support the programs of instruction developed; how can instructors be best selected, trained, and guided in their work; and what administrative officers are needed to perform essential functions in keeping the program running smoothly?

What procedures and instruments are needed in order to assure that the training program is meeting the qualitative and quantitative requirements for adequate performance of individual and team duties, and to provide factual bases for program improvement?

#### *Military Management—Human Relations and Morale*

What is the effectiveness of existing or proposed policies or programs of personnel utilization, and how well are they meeting their objectives?

What psychological factors influence the group effectiveness of combat teams?

How can leadership be measured and developed most effectively?

How can the motivation and morale of groups be measured and developed at a high level even under adverse conditions?

What procedures give best results in managing groups of personnel under various conditions?

The above questions require answering for each billet in the entire Navy and for each of the special weapons systems and programs of the Navy. A complete research and development program in sup-

port of a Navy program such as Antisubmarine Warfare, for example, will consist of a coordinated group of projects designed to provide answers to each of these questions to the extent that funds and facilities permit.

Each Division Program is organized according to the Standard Program Plan (Fig. 1). In general, each step on the chart represents a specific set of end products to be obtained from a single research project or subproject. The arrows on the chart show the relationships between the various steps and illustrate the points at which close interbranch coordination is necessary. This chart emphasizes the vital and central role of billet analysis and proficiency measurement. It stresses the fact that the billet analysis must be suitable for supporting the design of proficiency measures, the estimation of mental and physical requirements, and the determination of training requirements as well as for the establishment of billet qualifications, classifications, and codes. Proficiency measurement is presented as the focal point of the chart for use in evaluating the effectiveness of the various instruments, procedures, or devices developed. It should also be pointed out that the entire program will need to be coordinated with work on training devices, human engineering, and psychophysiology carried out by other naval research agencies and also with the basic research programs of the Office of Naval Research.

In planning new Division Programs the Standard Program Plan is used in the following manner: First, the decision is made as to which steps on the Standard Program Plan will be covered in the Program. Second, a project or subproject is designed to cover the relevant steps. Lastly, decisions are made as to the assignment of responsibility for each step together with a time schedule for completion of each.

At the present time, the Personnel Analysis Division has such active programs in the areas of ordnance ratings, guided missiles, surface antisubmarine warfare, shore antisubmarine warfare, air antisubmarine warfare, mine warfare, electronics technician, combat information center, officer personnel, enlisted-general duties, enlisted-specialized duties, limited ability personnel, and manpower requirements and utilization.

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# PUBLICATION TRENDS IN AMERICAN PSYCHOLOGY —A FIVE-YEAR EXTRAPOLATION<sup>1</sup>

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NATURALLY, psychologists have been very much interested in the great increase in the size of the American Psychological Association since World War II. Among those who are statistically inclined, the growth chart of psychology has lent itself to several long-term extrapolations. In an address this year before the New York State Psychological Association, Boring, who is himself an extrapolator, poked fun at the extreme prognostications by indicating that the projection of both population growth and increase in number of psychologists leads to the finding that at some future date there will be as many psychologists as there are people in the entire world.

In the present paper we shall be concerned not so much with the increase in psychologists as with the effect of this increase upon the number of publications in American psychology. We shall not try any long-range predictions; such extrapolations might result in the finding that at some future time the number of publications by psychologists will exceed the world's total literature. We shall be content with relatively short-term estimates. By considering the productivity of associates elected to the APA since the end of World War II through 1953, an extrapolation through 1958 should not be too hazardous. As we shall see, if this prediction can be considered reliable, even the immediate consequences are serious enough.

In preparation for an analysis of publications, let us briefly review membership trends. The category of associate was established in 1926, and in that year the new associates constituted about 7.7 per cent of the total APA. Since then, and especially after World War II, this group has grown enormously. By 1953 APA membership was 10,903, of which 84.7 per cent were associates. The percentage of associates as of January 1955 is estimated to be approximately 90 per cent of the total APA enrollment.

<sup>1</sup> We wish to express our appreciation for the assistance rendered by B. Goodman and M. Canarack.

What have the new associates contributed to psychological literature? By "new" associates, we mean those elected since 1946. We have approached this problem by taking a sample of approximately 100 names from each new group of associates. We did this by taking every  $N$ th name in each alphabetical list,  $N$  being the number of names in the list divided by 100. The number of publications for each year for each man in our sample was determined by checking each name against the annual author indices of the *Psychological Abstracts*. (Titles of papers given at meetings and abstracts of theses were excluded.)

For each year the publications of a given sample were summed. The total number of publications of the group represented by the sample was then estimated by multiplying the sum of the sample by the appropriate constant ( $N$ ). Then, for each year the total publications produced in that year by all groups of new associates were determined by simple addition. It should be noted that the number of new associates, as well as the number of publications, increased greatly from year to year. Thus in 1946 there were only 301 new associates, whereas by 1953 the accumulated number of new associates had increased to 7201. The numbers of publications by new associates in the various annual indices of the *Abstracts* are estimated as follows:

Year	'46	'47	'48	'49	'50	'51	'52	'53
Publications	18	33	198	350	313	690	969	1478

These figures indicate that the "class of" (elected in) '46 published 18 titles in 1946. The combined classes of '46 through '49 published 350 titles in 1949, etc. Finally, all eight classes ('46 to '53 inclusive) together published 1478 titles in 1953.

Certainly by 1953 the contributions of the new members were very considerable. Since the *Abstracts* listed 8092 items that year, the new associates published approximately 20 per cent of the world's psychological literature. It is possible to estimate what these contributions would have required if published in APA journals. Exclusive of



the *Psychological Abstracts* and the *American Psychologist* (which are omitted from consideration in the present study), the other eight APA journals in 1953 published 4009 pages. (These figures do not include book reviews which, in any case, play no role here.) The average length of articles in APA journals naturally varies. In 1953, the range of mean length was from 3.7 pages for the *Journal of Applied Psychology* to 24.6 pages for the *Psychological Monographs*. The mean for all eight journals combined is about 6.3 pages per article. The 1478 publications of the new associates may be assumed to have required 9311 pages. The publications of the new associates alone totalled considerably more than double the pages that were available in all APA journals in 1953. It is fortunate, both for the new as well as the old members, that other publication outlets existed.

What will be the future contributions of the associate members elected since 1946? In order to consider this problem we need to know what has been the per capita rate of publication among those recently elected and whether it has been increasing, decreasing, or remaining constant. We have therefore calculated from our data the mean number of publications per new associate according to the number of years each associate has been a member of the APA.

The resulting statistics are as follows:

Year in APA	1st	2nd	3rd
Mean publications per person	.085	.143	.149
Productivity as a percentage of first year	100	168	175

These results show that the new associates increase in mean productivity per person in their second year. The data suggest that the mean rate of publication increases only slightly after the second year. This agrees with other data (1) which indicate that psychologists and other scientists reach, or nearly reach, their maximum rate of output in the early thirties. These latter findings also show that the mean maximum rate is maintained roughly for twenty years or longer.

Utilizing the publication rates found above and the number of associates elected each year, we can predict how much each group of associates will publish during the next five years (1954-1958 inclusive). Thus to estimate the future publications of the class of 1953, it was assumed that, in accordance with previous experience, the number of publications in their second year would be 168 per

cent of the number published in 1953. No data on the productivity of the class of 1954 are yet available. It was assumed that the initial per capita output of this class would be equivalent to the mean initial per capita productivity of the classes of 1951, 1952, and 1953. The mean for these three classes combined is somewhat higher than that for the earlier groups: .144 for the first year and .242 for the second year. We have supposed that the new associates elected between 1954 and 1958 will number 1000 per year. This proposes a lessened growth since the numbers for 1952, 1953, and 1954 were, respectively, 1417, 1205, and 1356. To each of these hypothetical future classes of 1000, we have allotted 144 publications during the first year and 242 publications per year thereafter, in accordance with publication rates derived from recent experience.

Cumulating year-by-year the estimated outputs of all groups of new associates, we obtain the following probable totals:

Year	'54	'55	'56	'57	'58
Estimated contributions of new associates	1797	2073	2315	2557	2655

Compared to the 1478 publications which classes '46 through '53 authored in 1953, the extrapolation suggests that in 1958 classes '46 through '57 combined will publish 2655 items. These estimates imply of course that editorial standards will remain the same and that suitable publication outlets will be available.

The above figures predict an increase of approximately 1177 in the number of annual publications between 1953 and 1958 inclusive. If we allow 6.3 pages per publication, this increase means that over 7400 additional pages will be needed five years from now. Probably a considerable proportion of the increase between 1953 and 1958 will be taken care of by non-APA journals and by publications such as books and government reports. But even if only one-half of the anticipated increase of 7400 pages—3700—is added to the eight APA journals publishing original contributions, each journal will have to add over 460 pages. On the whole, this would mean a doubling of the size of the APA publications within five years. We predict that the APA will continue to have increasingly serious publication problems.

Of all publications by APA members, what proportion is being contributed by the new associates



and what proportion will they contribute within the next few years? We have approached this problem in a somewhat indirect way. First, we obtained a 10 per cent sample of all psychologists in the 1951 APA Directory by taking every tenth name in the Directory. Each of these names was checked against the name index of the 1952 *Abstracts*. On the basis of the data obtained, we estimate that APA members were responsible for 2786 publications listed in the 1952 *Abstracts*. Now in 1952 alone, the new associates (i.e., elected in 1946 through 1952) were responsible for 969 items, or about 35 per cent of the APA total. "Old" members, i.e., those who were not "new" associates, produced 1817 publications (2786 less 969). It seems reasonable to assume that these "old" members of the APA will continue to produce at roughly a constant rate for the next few years, i.e., they will produce about 1817 publications per year. If this is true, and if new associates, as we have estimated, produce 2655 publications in 1958, then clearly in that year the new associates will be responsible for about 60 per cent of the APA output. After that year the newcomers to psychology should continue to outstrip the oldsters in the number of their contributions.

However, they will probably not be producing as much per capita as the older members. Let us examine certain per capita publication rates. As noted previously, in recent years new members, during their second year in the APA, have produced .242 publication per person per year. Studies of earlier groups indicate that at one period psychologists published at the rate of one publication per person per year, or at four times the rate of our new members. Franz (6) seems to have made the first study of the productivity of psychologists. In 1916 he selected 84 persons who had been APA members for ten years, and checked their names against the *Psychological Index* from 1906-1915. He excluded from his list APA members who he felt were not solely psychologists, such as philosophers and educators. He found a mean publication rate of almost exactly one publication per person per year.

Fernberger did a similar study for the decade 1919-1928. Since the class of associate membership was introduced only in 1926, associates were not included in his sample. Fernberger obtained publication rates separately for men and women. The rates per person per year were respectively

.78 and .41 (4). Standards for membership in Fernberger's group are roughly comparable to fellowship standards today. Fernberger repeated his study for the period 1932-1936 (5). Again, he excluded associates from his group. From the data published by Fernberger one finds a publication rate per person per year of 1.35. (Men and women were not separated in this study.)

As a subsidiary outcome of the study of a random sample of APA members in 1951 (2, 3), we have calculated that the per capita productivity index for fellows in the most productive age groups (ages 30-50) was approximately .79.

Some of the divergences among the figures cited above are to be explained in terms other than temporal variations in psychological activity. Neither the *Abstracts* nor the *Index* has employed uniform criteria as to what should be listed. The publication rates of some persons are much higher if book reviews and papers read at national and regional meetings are included. In addition, the publication lag of the *Index* and the *Abstracts* has varied, resulting in some *Index*-years and *Abstract*-years including more, and some less, than 12 months of publication. But despite such confusing factors, the publication rate of .242 item per person per year for recent associates in their second year of APA membership is certainly lower than the current rate of .79 for 30- to 50-year-old fellows (3) and lower than the record of some earlier groups of psychologists.

It will be noted that the comparisons just presented are between recently elected *associates* (most of whom are associates still and many of whom may remain associates for life) and *fellows* or, when there were no fellows, members whose qualifications were similar to those of present fellows. Perhaps we should compare recently elected associates with associates elected earlier. However, from the point of view of over-all historical trends such statistics seem to us to be unprofitable. The basic facts are that at one time (prior to 1926) the APA consisted solely of "fellows" and today approximately 90 per cent of its members are associates. Studies other than our own show that, as a group, associates have been less productive than fellows (7). It seems almost inevitable therefore that the trend from 1926 to the present is toward lessened productivity per capita. This, however, is not necessarily undesirable, since few persons would hold that publication is the only worth-while activity of



psychologists. On the other hand, as demonstrated earlier in this report, the enormous increase in the size of the APA so offsets this decrease in individual productivity as to make it necessary to anticipate serious publication problems in the very near future.

More important than *quantity* of publications is, of course, their *quality*. By this time it will have become obvious to the reader that this topic has been ignored. This was intentional. Any fruitful assessment of the value of psychological publications must await other occasions and, not at all unlikely, other authors. But such an examination is mandatory. For, if the present extrapolations can be depended upon, this question is the crucial one in deciding what is to be done about the anticipated increase in the number of publications in the next few years. If the quality of manuscripts received by editors remains constant and if rejection rates are not altered, then the APA will have to face the problem of providing considerably more space for publication.

#### SUMMARY

The associates elected to the APA from 1946 through 1953 were probably responsible for over 1400 of the publications which were listed in the 1953 *Psychological Abstracts*. While the per capita publication rates of new associates are lower than rates of present-day fellows, and both are lower than the publication rates of earlier decades, the new associates have so increased in numbers since World War II as to suggest that their contributions to the scientific literature will make for serious

publication difficulties in the near future. It is probable that, in the absence of any radical change in policies, psychology by 1958 will need 7400 more pages per year than we now have. By the most cautious interpretation, the present difficulties in providing space for publications will be further aggravated in the near future. Even should half of the estimated increase be absorbed in publication outlets other than those of the APA, the Association journals will have to double their size by 1958 if the quality of manuscripts and editorial policies remain constant. An inherent aspect of this problem is the need to determine the *quality* of manuscripts received and of articles published.

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# PSYCHOLOGY IN NEGRO COLLEGES

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RECENT reports in this journal have presented data on psychology in institutions preparing teachers (2) and in junior and community colleges (1). The former study contained some data on psychology in Negro colleges.

A mail survey was used to determine the characteristics of psychology in Negro colleges throughout the United States. Twenty-seven out of approximately 100 questionnaires were returned. Since most of the institutions that responded are in the South, the scanty data collected may represent problems that are also, to some extent, of a regional nature.

Of the 73 psychologists in the 27 institutions that returned the questionnaire, 15 hold the PhD, 54 the MA, and 4 have no graduate training. Symonds, Klausner, *et al.* found that of 25 psychologists in Negro teacher training institutions, 4 held the PhD, 20 the MA, and one miscellaneous. These ratios of non-PhD's to PhD's suggest that psychology instruction in Negro colleges is less competent than that in non-Negro colleges.

Eighteen of our 73 psychologists are members of the APA. Thus, psychologists in Negro colleges are somewhat more likely to be APA members than are those in junior colleges (1), but less likely to belong than are psychologists in general. The lack of professional qualifications for membership may prevent many of them from joining.

Information was secured as to the institutions from which PhD's in Negro colleges received the degree. Typically, it is earned at a state or large city university, not in the South. PhD's from the following institutions were found in the sample: Indiana (two), North Dakota, Minnesota, Wyoming, Pennsylvania, Michigan, Virginia, Temple, Chicago, Denver, New York, Boston, and Radcliffe (one each).

The Negro college student typically is not offered the opportunity to become a psychology major. Thirty-four psychology majors were reported, and these were all in two of the 27 colleges in our sample.

The number of colleges giving various psychology

TABLE 1  
NUMBER OF COLLEGES OFFERING VARIOUS  
PSYCHOLOGY COURSES  
(*N* = 27)

Course	No. Colleges
Child, adolescent, or human development	24
General	19
Educational	19
Mental hygiene or adjustment	16
Social	9
Tests and measurement	7
Exceptional children	6
Abnormal	5
Personality	5
Experimental	4
History or systems	4
Applied	3
Statistics or individual differences	3
Miscellaneous	9

courses is presented in Table 1. The finding that courses in human development, child, adolescent, general, and educational psychology and mental hygiene are most commonly offered is similar to that reported for teacher training and junior colleges (1, 2).

Table 2 presents the total number of psychology courses listed by each college. The median number of courses offered is five, which is more than that usually available for the junior college student (1), but probably less than the number available in most undergraduate institutions.

TABLE 2  
NUMBER OF COURSES OFFERED BY EACH OF  
27 NEGRO COLLEGES

Number of Courses	Colleges offering
1	2
2	3
3	2
4	6
5	2
6	1
7	2
8	2
9	1
10 or more	6



Two of the 27 colleges have a laboratory, while a third is in the process of developing one. Most of the colleges have programs of counseling, guidance, a freshman testing program, and remedial reading facilities. Several have outside arrangements to provide clinical and therapeutic services when necessary.

Twelve of the colleges reported that psychologists on their faculties are doing research. Five of the research projects deal with such topics as follow-ups of alumni and the evaluation of testing programs and curricula. Other research mentioned includes studies of learning, mentally retarded Negro children, and interracial attitudes. One college is involved in Government-sponsored research.

The small number of returns in our mail survey indicates the probable nonrepresentativeness of these data. However, the quality of psychology in Negro colleges and the general lack of undergraduate majors seem worthy of professional attention.

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## BIRTHPLACES AND SCHOOLS OF EXPERIMENTAL AND CLINICAL PSYCHOLOGISTS

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INFORMAL discussions among psychologists occasionally lead to speculations concerning possible personality differences between those people who are attracted by experimental psychology and those who are attracted by clinical psychology. We know that the interests of experimental psychologists and clinical psychologists differentiate them from other psychologists and from each other (2, 3, 4). We also know that clinical psychologists differ from each other on the dimension of intuitive-objective attitudes (6) and presumably the difference on this measure between clinicians and those psychologists with primary research interests would be greater. There seems to be some basis for the assumption that personality affects vocational choice (5, 7).

Since psychologists, like other people, develop their beliefs and attitudes during their formative years, it seems of value to look at the early environmental conditions of two groups of psychologists who sometimes do not share the same attitudes and beliefs.

Biographical data from the 1951 APA *Directory* (1) on all the members of Division 3 (Division of

Experimental Psychology) and Division 12 (Division of Clinical and Abnormal Psychology) were used. Members of the groups were classified by the region and by the size of the community in which they were born and by the kind of institution which granted their first degree. Regions were the East, Midwest, West, South, and Foreign. Birthplaces were broken down into communities under 10,000, between 10,000 and 100,000, and over 100,000. Educational institutions were called universities if more than one college was included in the institution but were called colleges if only one course of study was available.

The birthplace was selected as the best clue to the geography of the early environment. While some of the members of the groups probably migrated at an early age from the community and even from the region in which they were born, there is no good reason to assume that the parents of prospective experimentalists were any more migratory than the parents of prospective clinicians. Thus, the error introduced by early environmental shifts should not be a selective one.

Some psychologists are members of both Division 3 and Division 12. No attempt was made to eliminate these people from the investigation and their data were added to both groups. Since the

<sup>1</sup> This investigation was made for a class in professional problems taught by Professor R. S. Daniel.

<sup>2</sup> Now at Central State Hospital, Indianapolis, Indiana.







concern here is with group differences, this procedure will not affect the results.

Since the entire populations of Divisions 3 and 12 were used in this investigation, all differences between the two groups represent real differences and no measures of statistical significance are needed. The totals for the regions do not add up to 100 per cent because 14.61 per cent of Division 3 and 18.30 per cent of Division 12 failed to furnish this information to the *Directory*.

In Table 1 it can be seen that the Midwest produces more members of Division 3 than of Division 12. Psychologists of foreign origins are more likely to be members of Division 12 than of Division 3. Large cities consistently produce more clinicians than experimentalists, and medium-sized cities consistently produce more experimentalists than clinicians. There is a tendency for small towns to produce more experimentalists than clinicians but the trend is not as definite.

The totals for any college and university combination may not total 100 per cent since not everyone who provided the other information gave this information. Members of Division 3 who came from small or large cities were much more likely to have received their undergraduate training at a university than were members of Division 12. This trend is evident but is less pronounced for people who originated in medium-sized towns.

While early environmental circumstances probably are not a primary factor in occupational choice, the evidence here suggests some relationship between membership in Division 3 or 12 and early environmental circumstances. A relationship between the kind of undergraduate institution attended and membership in Division 3 or 12 is also suggested.

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## JOB OPPORTUNITIES IN PSYCHOLOGY

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**B**ECAUSE it is issued primarily for the benefit of psychologists looking for jobs and for the benefit of those who have psychological jobs to offer, the APA *Employment Bulletin* contains a wealth of information on the opportunities currently available to men and women with psychological training. The vacancies listed month by month in the *Bulletin* form a kind of running commentary on the duties psychologists are asked to perform, on the salaries offered at the various levels of responsibility, and on the qualifications necessary for employment as a professional psychologist.

This article presents an analysis of the job offers listed in the twelve issues of *Employment Bulletin*

published during 1953. It includes all the listings, except for a few part-time assistantships and the general announcements inserted by government agencies.

#### SALARY

Most of the vacancies listed in the *Bulletin* specified a starting salary range. The mid-point of this range was used in calculating the median salaries given below. Since some of the salaries were per month, some were per calendar year, and some were per academic year, all salaries were reduced to a monthly basis to make comparison among jobs easier.



Although most of the listings in the *Bulletin* gave a starting salary range, about 13 per cent gave only "salary by negotiation." Since most of the "salary by negotiation" jobs were at the higher levels, the median salaries, calculated with these jobs excluded, are probably too low. Some institutional jobs offered subsistence in addition to salary. Where full subsistence was offered, we added an arbitrary \$125 per month to the base salary. Where subsistence was provided for a nominal sum, we subtracted that sum from \$125 per month and added the remainder to the base salary. These estimates of the value of subsistence are undoubtedly conservative, particularly for persons with a number of dependents.

Because the salaries mentioned are all starting salaries, and because the *Bulletin* contained comparatively few offers for jobs of high levels of professional responsibility, the median salaries probably reflect the earning power of young psychologists much more accurately than they reflect the earning power of psychologists in mid-career.

#### AGENCIES HIRING PSYCHOLOGISTS

In his 1948 survey of the APA membership, Wolfle (1) found that 50 per cent of the psychologists in his sample were working for colleges and universities, 24 per cent were working for government agencies, and 12 per cent were working for private organizations. In contrast, only 28 per cent of the job offers in the 1953 *Employment Bulletin* were for academic jobs, while 42 per cent were for jobs in government agencies, and 28 per cent were for jobs with private organizations. This trend may mean that the applied fields are growing rapidly, but it may also mean that a large proportion of colleges and universities staff their faculties by way of the academic grapevine rather than by way of the *Employment Bulletin*.

*Colleges and universities.* Of the 314 jobs offered in the 1953 *Bulletin*, 89 (28 per cent) were in colleges and universities. The median starting salary offered was \$452 per month, figured by dividing the annual salary by 9, unless a 12-month year was specified. If we can assume that psychology professors make as much per month during the summer as they make during the school year, the salaries offered academic psychologists compare favorably with the salaries offered psychologists in other fields. The \$452 median academic salary is, in fact, a little higher than the over-all median of \$435. If we assume that psychology professors

take the summer off and get along entirely on their teaching pay, the academic median drops to \$340.

*Government.* Of the 314 *Bulletin* vacancies, 133 (42.4 per cent) were listed by government agencies. The median salary for these jobs was \$440, a little below the adjusted academic median of \$452. Twenty-one of the 133 government jobs were with Federal agencies. Many of the Federal jobs were at high levels of responsibility and required the PhD with several years of additional professional experience. They included clinical practice in VA installations, research with various branches of the military, and supervision of cooperating research projects under government contract. The median starting salary for Federal jobs was \$580 per month.

The median salary for the 40 city and county vacancies was \$430 per month. Many of these jobs included testing and counseling in school systems, some were in mental health clinics, and a few were in penal institutions. The median salary for state jobs was \$375 per month. State jobs included clinical positions in hospitals, testing and personnel selection in civil service, and psychological work in prisons.

*Private organizations.* Eighty-eight (28 per cent) of the openings listed were in private clinics, in industry, and in consulting organizations. The median salary was \$448. Business, industry, and consulting firms accounted for 34 of the jobs in this category, while private clinics accounted for the remaining 54. Typically, the jobs in business and industry were for psychologists with some business or industrial experience, and in some cases, this kind of experience counted more heavily than academic training. On the other hand, almost all consulting firms run by psychologists required the PhD. Apparently, business men are not yet as convinced as psychologists of the value of high-powered academic training. The median salary for jobs in business, industry, and consulting firms (excluding private clinics) was \$496 per month.

Jobs in private clinics ranged in responsibility all the way from routine testing to supervising the work of a large professional staff. Many clinical jobs included therapy and research. Because a substantial number of the openings in private clinics were for psychometrists with relatively little responsibility or training, the median clinical salary was comparatively low, \$421 per month.



## DUTIES

*Academic.* The duties mentioned in 28 of the 89 job descriptions inserted by colleges and universities followed the familiar academic pattern of teaching and research. Twenty-seven of the 89 descriptions put emphasis on teaching rather than on research, and 25 of the openings were for teacher-counselors. The remaining nine were divided between teaching-counseling-research jobs and jobs which required full-time work on specific research projects. It is noteworthy that there were as many openings for the psychology teacher-psychological counselor as there were for the psychology teacher-psychological researcher. Apparently, there is a lively demand for the psychology teacher who can spend part of his time counseling, even though some psychologists have expressed reservations about the wisdom of this combination of duties (2).

*Clinical.* The duties mentioned in the 172 clinical job descriptions included testing, therapy, research, or some combination of the three. A typical description might read, "... administer and evaluate a wide variety of individual and group tests of intelligence, personality, and achievement, including projective techniques; participate in individual and group psychotherapy as part of a clinical team; perform independent research on problems affecting mental health."

Clinical jobs accounted for 55 per cent of the jobs listed. The median monthly salary, including both government and private clinics, was \$398. This is considerably lower than the \$435 over-all median, largely because of the psychometric jobs mentioned above.

*Applied.* Fifty-three (17 per cent) of the jobs were in applied fields other than clinical. Some of them were research jobs: "... investigate man-machine relationships, perform job analyses, design and test experimental apparatus." Some accentuated the application of psychological techniques to business and industry: "... appraise key people; develop sound human relations policies and practices in industrial, commercial, and educational organizations; advise management on psychological aspects of marketing." And some were primarily administrative: "... plan and administer procedures for coordinating several research agencies in the field of tests and measurements; evaluate research proposals and requirements; interpret and translate research findings for policy

makers and operators; serve on appropriate boards and committees." Many of these positions were at a high level of responsibility and required a considerable amount of training and experience beyond the PhD. The median salary was \$513 per month.

## QUALIFICATIONS

*Training and experience.* Almost half (46 per cent) of the job descriptions stated that the PhD degree was required. This is discouraging for the undergraduate psychology major who hopes to land a good job in psychology on the strength of his AB degree, but it is not out of line with Wolfe's report that more than half (57 per cent) of the APA members have the PhD (1). The median salary at the PhD level was \$512 per month. A little more than a third (38 per cent) of the listings specified the MA plus a certain amount of experience, usually one or two years, but sometimes more. The median salary at this level was \$413 per month. The \$100 per month difference between the PhD level and the MA level agrees with Wolfe's finding that in 1948 the median income of psychologists with the PhD was about \$1000 a year higher than the median income of psychologists with less training (1). Only a scant 10 per cent of the jobs listed were open to persons with the MA and no additional experience, and only 6 per cent were open to psychologists without an advanced degree. The median salary at the "MA only" level was \$350, and the median salary for jobs which did not require an advanced degree was \$325.

*Sex.* As usual, jobs offered to men carried higher pay checks than jobs offered to women. Ninety-six (31 per cent) of the jobs offered in the *Bulletin* were open only to men. The median salary for these jobs was \$474 per month, \$50 per month higher than the median salary for jobs open to either men or women, and \$102 per month higher than the median salary for jobs open only to women. In terms of earning power, the difference between the X and the Y chromosome appears to be just about as important as the difference between the MA and the PhD.

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## Comment

### A Public Relations Tool

The APA is to be commended for the pamphlet on public relations. It seems to me that we should push this program whenever feasible and appropriate. Informing the public so that psychology and the work of psychologists, both pure and applied, will be favorably understood by leaders of public opinion deserves repeated emphasis.

On rare occasions, our work is presented more effectively by nonpsychologists than psychologists themselves are able or willing to do. When this happens, we should do all in our power to spread the news because it is obvious that the nonpsychologist has no special axe to grind.

In my opinion, the recent book *Free and Unequal* by the distinguished biochemist Dr. Roger J. Williams is a case in point. Flesch counts by a University of Minnesota graduate student, Byron Teska, show it to rate at "Standard," like digest magazines; it is, therefore, suitable for a mass audience. Furthermore, it is written in an interesting style and comes to grips with a wide variety of important problems confronting America in the areas of medicine, law, education, political life, business and industry, etc. It emphasizes the contributions of genetics, biochemistry, psychology, and sociology to a better understanding of *individuality* and the important role of individual differences in everyday life. By getting laymen to read the book, we can help to combat anti-intellectualism. By getting physicians, lawyers, educational administrators, military and business leaders to read the book, we can get across a better appreciation and acceptance of psychology and the role that psychology is prepared to play.

The subtitle of the book is "The Biological Basis of Liberty." It is published by the University of Texas Press and priced at only \$3.50. The undersigned gets no royalty for the above blurb.

DONALD G. PATERSON  
University of Minnesota

### On Psychologists and Phonies

I should like to dispute Henry David's conclusion that "the public showcase of professional psychology has become more respectable . . . the growing competition from APA members has made the market place of the Classified Telephone Directories less attractive for enterprising 'phonies'" (*Amer. Psychologist*, 1954, 9, 240). My own feeling is that the presence of so many APA psychologists in the classified

section would have a "spread of effect" to others in the classified section and therefore might prove particularly attractive to the alleged phonies.

Why haven't the phonies kept pace with the psychologists in the classified section? I would suggest that the proportion of phonies increases with the increase in population and is related to general economic well-being, whereas the proportion of psychologists increases with opportunity for education. Of course, there are other factors, but I believe it is indeed shortsighted to expect any randomly selected group to keep pace with the mushrooming growth of psychologists.

Perhaps another point worth mentioning is the fact that certain personality characteristics of the psychologist and the phony psychologist may be so imbricated that it is very possible that *but for the grace of a handy education* the present classified psychologist might have appeared in the directories anyway—as a classified phony. Certainly there is no absolute dichotomy between the two groups in terms of actual function or phoniness when one considers that some self-styled clinical psychologists in APA have as little clinical training as the phonies.

Professionally speaking, I should be somewhat more worried than Mr. David about the fact that phonies increased 32 per cent, for I doubt very much whether APA's membership will in the future experience anywhere near the percentage increase it has in the recent past—while phonies will increase steadily—plus the fact that classified columns dominated by APA membership make a cozy spot for contumelious con-men, thus foreboding a possible upsurge in phonies.

If the propinquity of classified phonies to classified psychologists is indeed a grave problem, I suggest that a positive program to obtain dichotomization (related to training) in the classified section be undertaken by the psychologists themselves, for I strongly feel that Mr. David's statistics, in contradistinction to his analysis, make it improvident for us to discuss the classified psychologist issue lightly.

NORMAN YOUNG  
Anahist Company

### Military Reports—Published or Not Published?

Across the desk of many psychologists flows a constant stream of military agency reports. Many of these are unclassified and represent some of the significant experimental studies done in psychology. The volume of these reports combined with the usual scientific journals constitutes a massive literature and is



the burden which the research worker must bear. Indeed, as Oatfield<sup>1</sup> has recently put it, we now have found the fifth philosophical element. In addition to earth, air, fire, and water, we now have *paper*. My concern is with a special kind of paper: the technical report issued by a federal military laboratory representing the original work of a scientist at that laboratory or the extramural research produced under contract and issued by the agency as a technical report. This literature is large and important. Federal agencies—both military and civilian—have tried to order, catalog, and disseminate this mass of information. Important and skillful help is rendered by such groups as Armed Services Technical Information Agency, the Bio-Sciences Information Exchange of the Smithsonian Institution, the National Science Foundation, etc.

For some time I have been concerned with the answer to a relatively simple question: Are technical reports issued by military agencies to be considered formal, open scientific publications? There is no doubt to even the casual reader of our scientific bulletins that important contributions are being made directly by research workers in military laboratories. Technical reports are frequently issued documenting this work. It is not unusual to find these reports, many of which are not abstracted in the *Psychological Abstracts*, referred to in the references listed in articles. Nor is it unusual to find a journal article based upon a technical report previously issued by some military laboratory. Sometimes a reprint of a journal article is even issued as a technical report. In my own experience, I have taken part in some of these processes. For example, in a recent paper I referred to both U. S. and foreign military technical reports in the same manner in which I dealt with published reports in the open international scientific literature. At an earlier point in time I published a paper which was a version (perhaps in much more rigorous form) of a military technical report. I am using my own recorded experiences as instances for discussion. Other workers have done the same.

I perceive a contradiction. The contradiction revolves around the question: does a military technical report constitute scientific publication? If it does, then it is perfectly legitimate to refer to such reports in our own scientific writing. If military technical reports do not constitute publication and are to be considered as private unpublished reports, then they should not be used in support of a piece of published work. If military technical reports do constitute adequate scientific publication, then obviously they should not be republished in a slightly different form in the scarce and valuable pages of our APA journals.

<sup>1</sup> OATFIELD, H. Problems and parameters of science literature. *Sci. Mon.*, 1953, 67, 302-305.

I am posing the question because I believe that it is important that a wise decision be reached. This decision obviously has important impact on the efforts and work of our colleagues in military, federal, civilian, and industrial laboratories. Perhaps greater federal support could and should be secured for adequate dissemination of this material.

I have searched the *Publication Manual* of the APA for a specific answer to this question. It is not detailed except in Section 7.52 dealing with the citation of unpublished materials. None of the examples given deals specifically with the problem as discussed here. The problem, as I see it, is worthy of consideration by the membership, by the Publications Board, the Board of Editors, and by scientists interested in the increasingly difficult problem of scientific communication.

SHERMAN ROSS

University of Maryland

### More Comments about Publishing

In the comment section of the April 1954 *American Psychologist*, L. J. Bischof suggests instituting a system of placing in this journal abstracts of unpublished papers. The writer would like to express his wholehearted endorsement of this proposal, and to suggest additional reasons for its serious consideration by the Publications Board.

The immediate publication of abstracts of unpublished papers would do much to overcome one of the most serious difficulties in our existing system of communicating ideas and research findings within the profession—publication lag. It is not unusual to have two years elapse between the completion of a research project and the publication of its results in one of the psychological journals. There is an additional lag of six months to a year before the article is posted in the *Psychological Abstracts*. This lag has caused untold duplication of research effort, not to mention considerable grief and anxiety among graduate students who have found at some late date that someone else has stolen the thunder of their thesis when it was all but completed.

Dr. Bischof speaks of the "publish or perish" problem. It is possible that this is in part a result of our present publication policy. An employer is naturally interested to know whether or not a psychologist applicant has been doing anything, and the applicant's bibliography is one of the few indices available. A list of published abstracts might be quite sufficient for this purpose. As it is, the young psychologist is at a considerable disadvantage under the present system. He often does not have the resources to pay for immediate publication, nor to go to the convention to read a paper. Lacking such resources, he must wait



over a year before he can bring his work to the attention of a wide audience in the profession. Immediate publication of the abstract would fulfill this need, and would take considerable pressure off the regular journals.

Psychology is a rapidly changing field. When change is rapid, the need for adequate communication becomes acute. The same situation arose some years ago in physics where the advances in nuclear research were so rapid that existing channels of scientific reporting became totally inadequate. The response to this situation was substantially like that suggested by Bischof: immediate publication of short abstracts together with sufficient information to enable the reader to communicate directly with the writer.

This is a much more efficient form of communication than the "all (after two years) or none" system we now employ. I can think of no more important function for the *American Psychologist* to serve than to let American psychologists know as quickly as possible what their brethren are doing.

BENJAMIN W. WHITE  
AFF Human Research Unit No. 2

### A Problem of Definition of Mental Disease

Dated March 7, 1954, an official statement of the American Psychiatric Association<sup>1</sup> states, in part:

The American Psychiatric Association believes that State Medical Practice Acts should specifically include "the diagnosis and treatment of mental and nervous diseases and disorders" within the definition of the practice of medicine. . . . The Association's stand is opposed by some members of other professions who engage in various forms of "counseling." They erroneously assume that the amendment of medical practice acts in this manner would deprive them of some of their legitimate professional functions. . . . Without foundation, they claim that a teacher who gave sympathetic counsel to a nail-biting pupil, or a clergyman who advised a couple on marital adjustment problems might be accused of practicing medicine and risk prosecution. . . . Mental illnesses are well defined disease entities, and these are clearly described and delineated in the "Standard Nomenclature" and "Definition of Terms" officially recognized by the medical profession. (See . . . also, *Diagnostic and Statistical Manual, Mental Disorders*, American Psychiatric Association, 1952.)

The above quotation omits much of the original two-page statement that might be discussed. However, previous issues of the *American Psychologist* have discussed most of the issues raised; this note will be concerned only with an aspect that has not been specifically pointed up before. We need, I think, to question the

<sup>1</sup> Entitled "A Statement of the American Psychiatric Association's Position on Amending State Medical Practice Acts and Related Matters." American Psychiatric Association, Washington 6, D. C.

assumption that the treatment of mental disease can readily be differentiated from the treatment of minor emotional problems by reference to standard medical nomenclature.

To quote from pages 41 and 42 of the *Diagnostic and Statistical Manual, Mental Disorders*:

#### 000-x82 Adult situational reaction

This diagnosis is to be used when the clinical picture is primarily one of superficial maladjustment to a difficult situation or to newly experienced environmental factors, with no evidence of any serious underlying personality defects or chronic patterns. It may be manifested by anxiety, alcoholism, asthenia, poor efficiency, low morale, unconventional behavior, etc. . . .

#### 000-x84 Adjustment reaction of childhood . . .

##### 000-x841 Habit disturbance

When the transient reaction manifests itself primarily as a so-called "habit" disturbance, such as repetitive, simple activities, it may be subclassified here.

Indicate symptomatic manifestations under this diagnosis; for example, nail-biting, thumb sucking, enuresis, masturbation, tantrums, etc.

##### 000-842 Conduct disturbance

When the transient reaction manifests itself primarily as a disturbance in social conduct or behavior, it will be classified here. Manifestations may occur chiefly in the home, in the school, or in the community, or may occur in all three . . .

Indicate symptomatic manifestations under this diagnosis; for example, truancy, stealing, destructiveness, cruelty, sexual offenses, use of alcohol, etc.

The definitions quoted represent, of course, one extreme of the defined "mental disorders," which also include such diagnoses as "Acute Brain Syndrome associated with intracranial neoplasm," and "Schizophrenic reaction, paranoid type." However, the inclusion of practically all minor transitional personality disturbances in the standard manual of medical nomenclature seems to justify some concern about the amendment of medical practice acts as recommended by the American Psychiatric Association.

DANIEL WIENER  
St. Paul, Minnesota

### Further Comment on Discharge of Maladjusted Individuals from the Armed Services

As a military psychologist, I should like to submit the following remarks in reply to Beezer's comments regarding the discharge of maladjusted individuals from the armed services, which appeared in the December 1953 *American Psychologist*.

There appears to be an increasing tendency to view the military service as a potential panacea for most of the ills of society in general. It has been recommended



that the armed services undertake the task of educating this country's millions of illiterates. Furthermore, it has been proposed that the services provide rehabilitation, training, and employment for both the psychologically and physically handicapped. Beezer has extended the above proposals by suggesting the Navy assume the role of therapist for a large segment of personality and character disorders within the general population, thereby making "a tremendous contribution to the improvement of our society."

The above proposals, if they should be implemented, would undoubtedly make outstanding contributions to the welfare of our society. However, it is necessary to consider basic national policies and traditions in order to evaluate the various proposals in their proper perspective. First, the primary mission of the armed forces is determined by the will of the people as reflected through their congressional representatives. This primary mission has long been held to be the defense of our country, both in peace and war, and there is a deeply rooted policy that the military shall not exceed these boundaries and engage in endeavors which have always been civilian. Health and education are examples of the latter. If legislative changes are made to include the various proposed programs in the mission of the armed forces, and if the tremendous increase in military budgets that would be necessary to conduct the programs would be approved, the services will then be in a position to enter these heretofore nonmilitary areas of responsibility. Otherwise, let us put the responsibility where it belongs: in the hands of the civilian professional organizations whose sole mission involves the basic goals of the proposed programs. The educators of the country are the rightful owners of the illiteracy problem as are the mental hygiene, civic, and religious groups with respect to the development of character and personalities that are adequate to cope with the problems of mature everyday living. Given sound basic material, the naval service is charged with developing individuals into well-trained and skilled military men and maintaining a high standard of moral and character guidance within its military structure.

The Navy cannot, however, be expected to correct during a period of two to four years the severe personality and character defects that have been developing over an 18-year span.

Members of the armed forces who develop neurotic and psychotic disorders in the service are not returned to civilian life as "threatening 'characters'" but are placed under the jurisdiction of the Veterans Administration. Men separated with nonservice incurred character and behavior disorders are not merely "dumped back in the lap of civilian society." Even though this group is not subjected to any extensive psychotherapy, they do derive a therapeutic benefit from a formulation of present difficulties and a structuring of future plans.

The professional staffs take an active role in aiding the discharger with his problem of adjustment and readjustment at all Naval psychiatric facilities.

It should also be noted that many persons who, even with help, fail to adjust in the regimented and authoritarian military environment are able to function as useful citizens in civilian life. For example, enuretics and somnambulists rarely find difficulty in their civilian adjustment. Many culturally deprived and personally inadequate men find no difficulty meeting the limited demands made upon them when returned to their previous civilian environment. Passively dependent persons who are incapacitated when away from their families do not experience this difficulty as civilians. Furthermore, in those few cases where extensive psychotherapy is considered justified and where the individual would profit from therapy, he is referred to a civilian organization near his home.

The majority of the individuals referred to in Beezer's comments are discharged in the first two or three months of their enlistment. Even if funds were allocated and professional staffs were authorized for the rehabilitation of this group, the long-term and intensive nature of the psychotherapy necessary to obtain significant benefits would lead to a demand for facilities and personnel which is almost beyond conception.

The Navy's neuropsychiatric program is primarily oriented toward the prevention of mental illness. This includes the "screening-in" or study and placement of psychiatrically marginal personnel who might otherwise be lost to the service. The therapeutic implications of this program are great for those men whose personality disorders are amenable to other than intensive, long-term treatment.

(The opinions and assertions contained herein are the private ones of the writer and are not to be construed as official or representing the views of the Navy Department or the naval service at large.)

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### Let's Reduce Statistical Drudgery

Psychologists at the University of Illinois who have had the opportunity to work with a modern electronic computer (Illiac) are of the opinion that widespread availability of such a facility will enormously increase the pace of psychological research and drastically reduce routine computational drudgery. The Illiac performs multiplications and divisions at the rate of 1,000 per second and additions and subtractions at ten times this rate. The many research assistants who could be freed from their hours of calculation by the adoption of



electronic computing methods need not join the ranks of the "technologically unemployed." They could instead, with the money ordinarily used to pay them for mechanical work, be employed in the true function of the scientist, the formulation and empirical testing of hypotheses.

We urge serious consideration by APA members of ways and means whereby the Association could acquire a computer or establish a reasonable price with a private firm for the rapid processing of much of their data.

A Psycheac (Psychological Electronic Automatic Computer) would be expensive. The expense, however, would be recovered manyfold in purely monetary valuation, not to mention the scientific benefits accruing from the increased complexity of the research which could be undertaken. Even a charge of \$200 an hour, a rate which should fully cover the cost of operation of a computer, would be cheap to the user. Calculations which would entail an expense of \$350-\$450 if performed by desk calculator or punched-card methods could be done for less than \$50 on an electronic computer at the above rate. The psychologist has long recognized the need for treating more variables more rigorously in his experimentation, but has been deterred by lack of funds and time. These high-speed solutions would enable him to make significant progress toward the realization of this aspiration.

Electronic computation is not, of course, adapted to all kinds of analysis. The machines are most effective for analyzing large sets of data (but not so large as to exceed storage capacity) and for the more complex numerical operations such as solving simultaneous linear equations and determining the roots of a polynomial. Multivariate analyses of all sorts are efficiently handled. Product-moment correlations, multiple correlations, and factor loadings are being routinely calculated by psychologists at Illinois. So are matrix multiplications, matrix inversions, and latent root and vector problems.

Some of the problems which would have to be solved if the APA were to acquire an electronic computer are: (a) acquisition of the machine, (b) maintenance costs, (c) allotment of time, (d) preparation of programs, and (e) mode of operation. While detailed plans for the solution of these problems would properly be the result of extensive study, we offer some tentative suggestions to indicate the feasibility of the proposal.

1. *Acquisition.* A computer constructed for psychologists should have high-speed output and extensive storage space. A commercial machine with these facilities might cost in the neighborhood of \$800,000. This figure could possibly be reduced by as much as two-thirds if the APA were supplied with blueprints of some noncommercial computer already in operation, and could find an organization which was prepared to build to exactly the same pattern. Clearly the APA

could not make such an expenditure from its own funds. Foundation or government grants might meet the initial expense if the proposal were presented properly. Or, one of the machines in commercial production might be rented.

2. *Maintenance.* Experience at Illinois indicates that a computer laboratory can be maintained at a cost of not more than \$200 per hour of machine time. If this charge were made for use of computer facilities, the cost would still be small. A pay-as-you-go policy would probably be best, allowing each investigator to raise the funds from customary sources.

3. *Allotment of time.* Precautions would have to be taken to see that groups with large funds did not monopolize the computer. Fortunately an electronic computer is fast enough to handle a large volume of work. For example, only about an hour would be needed for obtaining rotated factor loadings from raw scores for a set of 30 tests.

4. *Preparation of programs.* A library of programs for the standard operations in psychological statistics would have to be prepared as soon as possible. Perhaps two or three programmers might be employed. The programming staff could also assist any psychologist in writing his own program if it were not already available in the library. If, however, the machine were an exact copy of one for which an extensive library of statistical programs had already been prepared, substantial savings could be made.

5. *Mode of operation.* Use of a computer, while not intrinsically too difficult for the psychologist, requires considerable specialized knowledge. In addition to the engineering staff, it would seem economical to maintain a small staff of specialists familiar with analyses of psychological data. Data could then be sent to the Psycheac group in raw form, together with an outline of the analysis proposed. The technical staff would draw upon its library of programs and put the data in the proper form for computer analysis. After processing, the results would be reconverted into a form interpretable by a psychologist with no knowledge of computer methods. Experimenters would have to be kept up to date on the kinds of analysis available so that they might design their experiments to make the best possible use of the Psycheac.

Although the idea of the APA's owning and operating an electronic computer may at first glance appear premature and impractical, experience with the Illiac indicates that the problems involved are not insurmountable. The existence of an available electronic computer would be of incalculable value to psychologists, especially those in institutions too small to maintain a computer locally.

GEORGE S. LEAVITT, GEORGE STONE,  
AND CHARLES WRIGLEY  
*University of Illinois*



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## Across the Secretary's Desk

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### The "Reece Committee"

The recent activities of the House Committee to Investigate Tax Exempt Foundations seem to have significance for the country as a whole and perhaps special significance for psychology and related fields. Because not many psychologists have been able to follow in the press the story of this Committee's hearings, Michael Amrine, APA Public Information Consultant, was asked to prepare for this space a running account of the Committee's activities and of reactions thereto. The account is clearly not a systematic sociopsychological analysis; it is perhaps colored by the attitudinal frailties of both author and editor. But it does give psychologists a skeletonized story of a recent and interesting series of events in Washington.—F. H. S.

The "Reece Committee" grew out of an earlier committee headed by Rep. Eugene Cox (D.) of Georgia. The first committee began its work in April 1952, and reported on January 1, 1953. It sent out 1500 questionnaires and took nearly 1000 pages of testimony. The chairman, Mr. Cox, died suddenly on December 24, 1952, just before the committee was to report.

The committee itself issued a 14-page report generally in favor of the work of America's foundations. For example, the Cox Committee report said that "on balance the record of the foundations is good"; that studies of the social sciences "may prove even more important than the accomplishments in the physical sciences"; and that tax laws should encourage gifts to "these meritorious institutions."

July 27, 1953. According to the *New York Times*, "the [Cox] report did not please Republican member [of the committee] B. Carroll Reece of Tennessee, former National Chairman [of the Republican National Committee] and a Taft supporter."

Mr. Reece proposed a second investigation, declaring that foundation witnesses did not testify under oath and charging that foundations took part in a "diabolical conspiracy" to "further socialism in the United States." The House voted 209 to 163 to let Rep. Reece make his investigation and appropriated \$115,000 to carry it out. Mr. Reece was made chairman of a new select committee. Norman Dodd was made research director. Other members of the committee were Jesse P. Wolcott (R., Michigan), Wayne L. Hays

(D., Ohio), Mrs. Gracie Pfost (D., Idaho), and A. L. Goodwin (R., Mass.). The committee held no hearings for 10 months while the staff studied the foundation field.

May 18, 1954. The hearings opened with the reading of a long statement by Dodd. He said that funds of some foundations have been used to finance ideas "incompatible with the fundamental concepts of our Constitution." He said that between 1933 and 1936 this country went through a "revolution." The fact that this revolution was peaceful and supported by "an overwhelming majority" he suggested could be explained only on the ground that "education in the United States had prepared in advance to endorse it." Dodd said that he had directed the committee staff "to explore foundation practices, educational procedures, and the operations of the Executive Branch of the Federal Government since 1903 for reasonable evidence of a purposeful relationship between them."

Dodd also said that grants made by foundations—"chiefly by Carnegie and Rockefeller"—had been "directing education in the United States toward an international viewpoint and discrediting the traditions to which it had been dedicated"; that the foundations had been "training individuals and servicing agencies to render advice to the Executive branch of the Federal Government; decreasing the dependency of education upon the resources of the local community and freeing it from many of the natural safeguards inherent in the American tradition; changing both school and college curricula to the point where they sometimes denied the principles underlying the American way of life; financing experiments designed to determine the most effective means by which education could be pressed into service of a political nature."

In studying the relationship between foundations, education, and government, Dodd said that the committee staff had particularly studied the following associations: The American Council of Learned Societies, the National Research Council, the Social Science Research Council, the American Council on Education, the National Education Association, the League for Industrial Democracy, the Progressive Education Association, the American



Historical Association, the John Dewey Society, and the Anti-Defamation League. He said there was a high degree of cooperation and common interest among these organizations and added: "This may explain why the foundations have played such an active role in the promotion of the social sciences, why they have favored so strongly the employment of social scientists by the Federal Government and why they seem to have used their influence to transform education into an instrument for social change."

Mr. Dodd's report also cited the Parent Teachers Association, the National Council of Churches, and the Committee for Economic Development.

*May 20, 1954.* Dr. A. H. Hobbs, assistant professor of sociology at the University of Pennsylvania, told the committee that a particular and perhaps dangerous fault in the operation of foundations was a concentration on "empiricism." According to the *New York Times* Dr. Hobbs described empiricism as a "pursuit of research, not by accepted scientific standards, but through experiment and even a basing of findings on 'manipulated' or 'computed' statistics not gathered by those who reached the conclusions."

*May 26, 1954.* Aaron M. Sargent, a San Francisco attorney who said he had 17 years of experience in looking for "radicalism" in the American educational system, told the committee that "radical intellectuals" organized an attack on basic American philosophy as early as 1892. Mr. Sargent said that one of the earliest things that they did was "to establish the federal income tax in order to pave the way for national federal socialism." Rep. Wayne L. Hays (D.) of Ohio pointed out that Cordell Hull, a former Secretary of State, had been a Congressman at the time and had introduced the income tax bill.

*May 26, 1954.* Mr. Sargent, still on the witness stand, accused the National Education Association of having sponsored textbooks which stressed the "seamy side of American life" but pictured the Soviet Union as a land of "sweetness and light." He said the textbooks sponsored by the association were financed by a \$50,000 grant from the Rockefeller Foundation. He claimed that 113 "Communist-front" organizations had "participated" and fifty "Communist-front" authors had contributed to a series of three textbooks called "Building America" for junior high school classes.

Mr. Sargent said that studies leading to the

books were initiated at The Ohio State University under a Rockefeller grant and that NEA later took over the sponsorship. Rep. Hays retorted that "Ohio State is radical, all right. Sen. John W. Bricker is a trustee and has appointed other trustees."

*June 2, 1954.* Norman A. Sugarman, Assistant Commissioner of Internal Revenue, told the Committee that only a fraction of 1 per cent of some 32,000 educational foundations had been found by the Bureau to have engaged in political or other activities which would cause them to lose their tax exemption as educational organizations.

T. Coleman Andrews, Internal Revenue Commissioner, supported Mr. Sugarman's testimony. On this same day Rep. Gracie Pfost (D., Idaho) protested that the staff of the committee was running the inquiry and that members were working almost as "visitors."

*June 9, 1954.* Mr. Dodd's assistant research director, Mr. Thos. M. McNiece, was questioned by Rep. Hays. Mr. Hays read several quotations and asked Mr. McNiece to analyze them. McNiece said that they paralleled "very closely Communist ideals." Mr. Hays then revealed that the quotations were taken from Papal Encyclicals.

*June 16, 1954.* Pendleton Herring, president of the Social Science Research Council, appeared before the committee and accused its staff of trying to "rewrite history." He said, "To imply that an interlock of individuals unknown to the American public is responsible for basic changes in our national life over the last fifty years is to belie the responsible statesmanship of the Republic, the law-making authority of the Congress, and the good sense of the American people."

*June 17, 1954.* A two-week cooling-off period for the committee and a recess from hearings was decided upon. Mr. Reece said that Mr. Hays had used obstructionist tactics and said that at one point of the inquiry a witness had been interrupted 246 times by Mr. Hays during a period lasting 3 hours and 5 minutes.

*June 18, 1954.* Arthur S. Adams, president of the American Council on Education, testified before the committee. He said, "To say that education provides the motivation for change because it performs these functions is like saying that fire engines cause fires because they are usually present at the scene and seem to have a significant role in the proceedings."



He also said, "The idea that such diverse institutions as the University of Notre Dame, Southern Methodist University, Yale and the University of California, have adopted or would ever adopt the same curriculum is simply inconceivable."

"Mass indoctrination is therefore a theoretical as well as a practical impossibility in America today. It cannot exist so long as any minority is free to raise its voice."

July 1, 1954. Sen. Pat McCarran (D.) of Nevada proposed an amendment to the Administration's omnibus tax bill, which would cancel the tax exemption of any foundation or other such organization that contributed to "subversive" organizations or gave grants to subversive individuals. The proposal was passed without debate.

The *New York Herald Tribune* News Service reported, "the sleeper amendment added to the big tax revision bill on the Senate floor threatens to curtail severely or even put out of business the big foundations such as the Carnegie and Rockefeller Foundations."

"The amendment has an innocent-sounding purpose—namely to prevent the foundations and charitable organizations generally from making grants to Communist and Communist-front organizations and individuals. . . . The amendment would abolish tax-exempt status for any institution which makes a grant to a subversive individual—as distinct from an organization. If out of the 3000 grants made annually by the Rockefeller Foundation, for example, one went to an individual who later proved to be a Communist sympathizer, the foundation would lose its tax-exempt status for a minimum of two years—possibly long enough to put it out of business."

"Furthermore, the same rules apply to grants made abroad. Under a strict interpretation of the amendment, the Rockefeller Foundation would have to be able to prove that every Egyptian peasant getting DDT was not a Communist."

July 2, 1954. The special committee voted 3 to 2 to hold no more hearings.

The *New York Times* said that the end of the hearings came as "the foundations were just beginning their rebuttals to insinuations by the committee staff and its witnesses that they had put many millions of tax-free dollars into projects allegedly bearing Socialistic or Communistic implications."

The committee said that the cases of the founda-

tions could be presented by sworn statements, or briefs, and would be made public.

Voting against the plan to close hearings and take briefs were Mr. Hays and Mrs. Pfof; for it were Mr. Reece, Mr. Goodwin, and Mr. Wolcott. Mrs. Pfof in opposing the move said, "It is very unfortunate. The foundations should have an opportunity to present their side in public hearings and be subjected to questioning. It is unfortunate that the majority of the committee did not have the courage to allow that. It is an unhealthy condition." "After all, you cannot cross-examine a brief," Mrs. Pfof said.

July 5, 1954. Under the headline "Another Stupid Inquiry" the *New York Times* editorialized that "the suspension of public hearings by the special House of Representatives committee to investigate foundations is inexcusable. Twelve witnesses have so far been heard in public session. Nine of these have attacked the foundations—on grounds fantastic almost beyond belief. . . . The history of this committee has been a disgrace to Congress."

July 12, 1954. Charles Dollard, president of the Carnegie Corporation, issued a statement answering criticism of this foundation. Mr. Dollard said that quotations had been taken out of context and essential material had been omitted by critics of two of the foundation's projects. For example, said Mr. Dollard, witnesses before the Reece Committee had given the impression that Gunnar Myrdal, who had done a study on "The Negro Problem and Modern Democracy," was "consistently and bitterly critical of everything American." In fact, said Mr. Dollard, his work as a whole showed his "profound respect" and "deep affection" for America and Americans.

July 20, 1954. Rep. Jacob K. Javits (R.) of New York asked for an investigation by the House Rules Committee of the Reece Committee. He said, "It is high time that the House of Representatives asserted itself in one of these investigations that has gotten off the tracks."

July 21, 1954. The McCarran amendment to the omnibus tax reform bill, it was decided, would be "taken to conference." This parliamentary phrase ordinarily means that it is understood the conference committee would eliminate it.

July 21, 1954. The American Council of Learned Societies, in its statement filed with the committee, denied that any of its activities ever had smacked of subversion. Dr. Cornelius W. de Kiewet said



that "to lay broad and loose charges against education can itself become a form of subversion against which it is the duty of intellectual leaders to speak forcibly and emphatically."

*July 24, 1954.* A 42-page statement was filed by the Ford Foundation which called the charges against private foundations the "sheerest nonsense." H. Rowan Gaither, Jr., president of the Ford Foundation, said, "We regard the decision to discontinue public hearings and to limit the foundations' defense to written statements or closed sessions, as a puzzling and unexpected act of injustice."

*August 4, 1954.* Dean Rusk, president of the Rockefeller Foundation and the General Education Board, made public extensive replies to charges made by the committee's staff. In so doing, he asked for an opportunity for "Rockefeller officers to be heard on the draft of any report the Committee proposes to submit." And he noted that "Were we to undertake to make a full statement on all matters commented upon before the Committee we would have to range over most of our tens of thousands of grants and deal with a full half century of the social, economic and political history of the United States. Yet we have been asked to reply promptly and briefly."

The statement had a full answer to the criticism aired by the Committee that foundations have had an undue emphasis on empiricism and "a premature effort to reduce our meager knowledge of social phenomena to the level of applied science."

It said, in part, "Although his problems of procedure were difficult enough, the social scientist also faced the resistance and even hostility of man himself, with his personal or group interests affected and his emotions and traditional patterns upset by new knowledge."

It said the social scientist "believes that he is beginning to know something, even though he is sure that he does not know everything. For example, we know a great deal more now than we did twenty years ago about the processes by which we make a living in a free enterprise economy . . . we know more about the consumer . . . we know more about personnel selection . . . motivations which affect productivity . . . processes of normal development, the way in which people learn. We can be quite accurate about short-range population predictions affecting such matters as our requirements for schools and teachers or our pool of manpower for military service. . . .

"Our society is deeply in debt to the best of the social scientists. They are among the most important of today's pioneers."

"As far as the Rockefeller Foundation is concerned, we attach no particular importance to the argument about whether the term 'social science' is properly used. Some of those who object to it probably overestimate the certainties of the natural sciences. Some who use it may claim too much for our knowledge of man. It is our view that much more can be known about man than we now do and that knowledge is to be preferred to superstition or prejudice. If a little knowledge is a dangerous thing, the remedy is to advance further into the unknown and seek out its mysteries, not to retreat into enforced ignorance."

*August 8, 1954.* Rep. Reece on a television program emphasized that the committee was curious about the tax-exempt status of small foundations as well as large ones. He said many of the small foundations were "tax dodgers." He said the Government was investigating the firm of Junto, Inc., of Philadelphia and the Des Moines "University of Lawonomy."

*August 23, 1954.* Mr. Reece, in a statement inserted in the Congressional Record, charged that some newspapers had "deliberately misrepresented" his investigation. He cited the *New York Times*, the *New York Herald Tribune*, and the *Washington Post and Times Herald*.

He said "The attitude of the committee and its staff and the occurrences at the hearings have been deliberately misrepresented to the public with such obviously intended malice that no explanation seems rational but that the power of some of the major foundations and their sycophants is truly great."<sup>1</sup>

*August 24, 1954.* Rep. Wayne L. Hays answered Mr. Reece's statement by saying that "it is 20 per cent false and 80 per cent nonsense—or the other way around; I haven't been able to determine which."

*September* — As this issue went to press, the committee was telephoned to see if it had yet issued a report. It had not.

<sup>1</sup> In preparing this account, we relied on the newspapers subscribed to at APA headquarters, namely the *Washington Post and Times Herald* and the *New York Times*. Many newspapers and widely-quoted commentators supported the charges originally made by Mr. Reece and Mr. Dodd.



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## *Psychological Notes and News*

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**H. Richmond Davis**, New Haven, Connecticut, died suddenly in New Haven on June 28, 1954.

**Harry A. Jager**, who was with the U. S. Office of Education, died on May 7, 1954.

**Herbert R. Laslett**, professor of educational psychology at Oregon State College, died on May 31, 1954.

**Howard Rice Taylor**, for many years head of the department of psychology at the University of Oregon, died on July 18, 1954 after a brief illness. A memorial fund has been set up by his colleagues and friends to furnish a study room for graduate students in the department. Correspondence with regard to it may be sent to Leona E. Tyler, Department of Psychology, University of Oregon.

**John T. Cowles**, senior project director of Educational Testing Service, has resigned to accept a position as assistant for personnel services to the vice chancellor of the Schools of the Health Professions, University of Pittsburgh, with appointment as professor of psychology in the School of Medicine.

**Robert F. Peck**, formerly vice president and research director of Worthington Associates, Inc., has accepted an appointment as associate professor in the department of educational psychology at the University of Texas. He will continue as research associate of the Committee on Human Development, University of Chicago, serving as psychological consultant on the Committee's Kansas City study of middle age and aging.

**Forrest L. Erlandson** has been appointed assistant dean in the School of Dentistry at the University of Minnesota. He was formerly a senior counselor in the Veterans Counseling Center at the University of Minnesota. The position of assistant dean is a new one. The duties of the job include acting as chairman or secretary of the admissions committee, liaison-secretary of the four disciplinary committees, counseling of dental and pre-dental students, conducting psychological research in the field of dentistry, assisting graduate students with sta-

tistical problems, conducting the dental aptitude testing program, assisting in the preparation and evaluation of classroom examinations, as well as many purely administrative duties.

Recent appointments at Denison University include the following: Parker E. Lichtenstein, dean of the college; Mark W. Smith, dean of men; Irvin S. Wolf, chairman of the department of psychology; and Robert L. McCleery, director of vocational services.

The University of Vermont announces the following changes in its department of psychology: John T. Metcalf has retired as professor of psychology and chairman of the department. James P. Chaplin has been appointed as the new chairman. H. L. Ansbacher has been awarded a Fulbright Grant and will lecture at the University of Kiel, Germany, during the 1954-1955 academic year. Harriet Foster, who was a research fellow at Columbia University during the past year, will replace Dr. Ansbacher. Also joining the staff are Douglas Anger, who completed his doctoral work at Harvard during the past year, and Michael Cann, who has been employed by the Clarostat Manufacturing Company. Other members of the staff are Bennet B. Murdock, Jr. and Mona G. Gustafson.

**Junius A. Davis** has been appointed instructor of psychology at Emory University. He was formerly assistant director of the counseling service at Princeton University.

**Hallack McCord** has been named director of education at Laradon Hall, a school for exceptional children in Denver. In addition to holding down his new position, he will continue to teach courses in applied communication at the University of Colorado, Denver Extension Center.

**John Bucklew**, who spent the academic year 1953-54 in France on a Ford Faculty Fellowship, has now returned to his position as associate professor of psychology at Lawrence College, Appleton, Wisconsin.

**Arthur H. Davison** has been appointed senior psychologist in the treatment unit at the California State Prison, San Quentin, California.



**Paul F. Menges** has accepted the position of editor at the Bureau of Business Management, University of Illinois, Urbana, Illinois, beginning September 1. He was formerly an employment interviewer with the New York State Employment Service and division superintendent at Bloomingdale, New York City.

**Fred C. Ford** left the position of director of personnel at the University of Mississippi to accept the position of associate director of personnel at the University of Pennsylvania.

**William N. Goodwin** assumed the duties of director of counseling at the Hartford Y.M.C.A., Hartford, Connecticut on September 7, 1954. Formerly he was vocational counselor with the Vocational Service Center, New York City.

**R. G. Heckelman** has taken leave of absence from his job as psychologist for the Orange County (California) schools this year. He has accepted a position as instructor in psychology at Oregon State University and at the same time is entering the doctorate program.

**Charles L. Roberts**, formerly with the Ohio State University Rehabilitation Center in Columbus, is presently affiliated with the Rehabilitation Center, Inc., in Louisville, Kentucky, as chief of psycho-social services.

**Charles K. Ramond** was acting military chief of Human Research Unit No. 3 at Fort Benning, Georgia, until September 28. He is now attending the Adjutant General's School at Fort Benjamin Harrison, Indiana.

**D. E. Sell**, supervising psychologist for Ohio's Division of Correction, announces the appointment of three psychologists to the division. **Jesse Harvey**, formerly instructor at Fresno State College, and **Lawrence Eskin**, formerly associated with the Mental Health Clinic Association of Holyoke, Chicopee & Northampton Area, Inc. of Massachusetts, have joined the staff at the Ohio Penitentiary as senior staff psychologists. **Robert Scollon**, formerly affiliated with the Instructional Film Research Program at the Pennsylvania State University, has joined the staff at the Ohio State Reformatory as a senior staff psychologist.

The psychology department of the Norfolk State Hospital currently consists of Walter G.

**Klopfer**, chief psychologist; **Earl S. Taulbee**, assistant chief; **William J. Reiss**, psychologist; **Ralph Robinowitz** and **A. M. Marchionne**, psychology interns. In addition, Drs. Klopfer and Taulbee are on the faculty of the University of Nebraska College of Medicine, and serve the Norfolk public schools as school psychologist and psychology instructor respectively.

**Kenyon B. De Greene** is now working with the University of California Far East Program, which offers extension courses in Japan, Korea, Guam, and Okinawa. He was formerly with the department of psychology, Montana State University.

#### VA DEPARTMENT OF MEDICINE AND SURGERY ANNOUNCEMENTS

##### *Clinical Psychology*

**Dean C. Affleck**, a graduate of the VA Training Program, Northwestern University, has been appointed to the staff of Mental Hygiene Clinic, VA Hospital, Chicago, Illinois.

**V. Edwin Bixenstine**, a graduate of the VA Training Program, University of Illinois, has been appointed to the staff of VA Regional Office, Indianapolis, Indiana.

**Warren K. Garlington** has resigned from the staff of VA Hospital, Sheridan, Wyoming, to accept a position with Montana State University.

**Eleanor A. Jacobs**, a graduate of the VA Training Program, University of Buffalo, has been appointed to the staff of VA Hospital, Buffalo, New York.

**Thomas W. Kennelly** has transferred from VA Hospital, Battle Creek, Michigan, to the position of Chief, Clinical Psychology Training Unit, VA Hospital, Coatesville, Pennsylvania.

**Daniel Lucas**, a graduate of the VA Training Program, Penn State University, has been appointed to the staff of VA Center, Kecoughtan, Virginia.

**William E. Morris**, a graduate of the VA Training Program, University of Tennessee, has been appointed to the staff of VA Regional Office, Pass-A-Grille, Florida.

**Ralph A. Nelson** has been appointed to the staff of VA Hospital, Knoxville, Iowa.

**Burton S. Rosner** has been appointed physiological psychologist on the staff of VA Hospital, West Haven, Connecticut.



**Murray E. Tieger** has transferred from the staff of VA Regional Office, Cincinnati, Ohio, to VA Hospital, Cincinnati, Ohio.

#### *Counseling Psychology*

**Edwin S. Raub** has been promoted to the position of Chief, Vocational Counseling Service, VA Hospital, Coatesville, Pennsylvania.

**John C. Phillips** has resigned as Chief, Vocational Counseling Service, VA Hospital, Coatesville, Pennsylvania.

**John P. McNulty**, a graduate of the VA Counseling Psychology Training Program, Ohio State University, has been appointed to the position of Chief, Vocational Counseling Service, VA Hospital, Tomah, Wisconsin.

The **American Psychosomatic Society** will hold its twelfth annual meeting at The Claridge Hotel in Atlantic City on Wednesday and Thursday, May 4 and 5, 1955. This meeting will be immediately preceded by those of the American Society for Clinical Investigation and the Association of American Physicians. It will be followed by the meeting of the American Psychoanalytic Association. The program committee would like to receive titles and abstracts of papers for consideration for the program no later than December 1, 1954. The time allotted for the reading of each paper will be 20 minutes. The committee is interested in investigations in the theory and practice of psychosomatic medicine as applied to adults and children in all of the medical specialties, and in contributions in psychophysiology and ecology. Abstracts for the program committee's consideration should be submitted in duplicate and should be sent to the chairman, Dr. Lawrence S. Kubie, at 551 Madison Avenue, New York 22, New York.

The fifth annual scientific meeting of **The Society for Clinical and Experimental Hypnosis** will take place on October 30, 1954 at the New York Academy of Sciences in New York City. Full membership in the Society requires American Specialty Board status or the equivalent and published hypnosis research. Psychologists require the PhD, five years in clinical or experimental work, and publications. Equivalent background is necessary for other disciplines. There are lesser requirements for Associate members and greater for Fellows. The Society publishes a quarterly, the *Journal of Clinical and Experimental Hypnosis*.

Inquiries about membership should be addressed to the president, Jerome M. Schneck, MD, 26 West 9th Street, New York 11, New York.

The next congress of the **Association Internationale de Psychotechnique** (Psychologie Appliquée) will be held July 18-23, 1955, in London. Four plenary sessions are planned on the following themes: the psychologist and society, the evaluation of methods in applied psychology—the problem of criteria, the relationship between research and practice, and the assessment of attitudes and the relation of attitude to behavior. The remainder of the congress will be taken up by meetings at which questions relating to particular aspects of applied psychology—especially educational, clinical, and occupational psychology—will be discussed. Themes proposed are: measurement in applied psychology, handling of exceptional children, special psychology of the classroom, technical education and training, classification of occupations for vocational guidance purposes, social adjustment in mental deficiency, validity of projective techniques, communications problems, varieties of industrial culture, the worker and his tools, motivation in industry, resistance to technological change, and problems of aging. These meetings will consist partly of symposia and partly of individual papers. The organizing committee is interested in receiving suggestions for other themes in applied psychology which might be discussed. Members wishing to offer a paper at the congress are requested to send a summary of 250 words to the organizing secretary, Alec Rodger, 14 Welbeck Street, London W. 1, England, before December 31, 1954.

The executive committee of the **International Association for the Coordination of Psychiatry and Psychological Methods** met in Paris on September 30 and October 1 and 2. The representative of the APA was J. Q. Holsoapple. Members of the committee are R. Nyssen (Brussels), president; J. Germain (Madrid), secretary; A. Rey (Geneva); M. Ponzo (Rome); H. J. Eysenck (London); J. Grewel (Amsterdam); E. Krapf (Buenos Aires); R. Zazzo (Paris); A. A. Araujo (Lisbon); M. Gozzano (Rome); J. Leme Lopes (Rio de Janeiro); P. Pichot (Paris); E. Mira (Rio de Janeiro). Honorary members are H. Delgado (Lima); C. Menninger (Topeka); H. Piéron (Paris).



The Spanish Society of Psychology will hold its second annual meeting in Madrid on November 3-6, 1954 under the chairmanship of the president, José Germain. As usual, a foreign psychologist has been asked to attend the meeting and to deliver some lectures. Last year Professor Piaget from Geneva was invited for this purpose. This year Professor Gemelli from Milan will give three lectures on these topics: "Le caratteristiche del canto umano dimostrate con i metodi dell'elettroacustica," "Percezione e personalità," "Per quale ragione io non sono psicoanalista." Other papers will be delivered by Julian Marias, José Germain, Mariano Yela, Victor Fontes, Ricardo Ibarrola, J. J. Lopez Ibor, and other Spanish psychologists. At the end of the meeting, as is customary with the foreign psychologist invited, the title of Honorary Member of the Society will be granted to Professor Gemelli.

The James McKeen Cattell Fund announces the continuing availability of grants for the support of work which will further the useful applications of psychology. Eleven requests for such grants were received for consideration at the annual meeting of the trustees of the Fund held in February this year. Two awards were made. One was to Kenneth R. Hammond of the University of Colorado for work on the selection of state highway patrolmen. The other grant was to Ralph M. Reitan of the Indiana University Medical Center in support of a study of the psychological effects of brain damage. Requests for grants to be awarded at the 1955 annual meeting of the trustees should be filed before February 1. Further information and directions for applying for grants may be obtained by addressing the secretary-treasurer, Dr. Elsie O. Bregman, 425 Riverside Drive, New York 25, N. Y.

The following new research grants were awarded to psychologists by the National Institute of Mental Health upon recommendation of National Advisory Mental Health Council, in June 1954:

John E. Anderson and Dale B. Harris. University of Minnesota. The relation of childhood behavior to adjustment in adulthood. Three years. First year \$14,796.

Albert Bandura. Stanford University. Relation of therapeutic competence to personality of psychotherapist. One year \$1,851.

Douglas Blocksma, Robert Fox, and Ronald

Lippitt. University of Michigan. A study of methods for improving social acceptance and participation of rejected children. Three years. First year \$27,972.

Louis D. Cohen. Duke University. The assessment of change in anxiety level. One year \$5,400.

Francis J. Gerty, Ann Magaret Garner, and Charles Wenar. University of Illinois College of Medicine. Studies of psychosomatic disorders in children. Two years. First year \$22,396.

Ernest A. Haggard. The University of Chicago. Family adjustment, personality, and mental processes. Two years. First year \$14,018.

H. F. Harlow. University of Wisconsin. Symposium on interdisciplinary research in the behavioral, biological, and biochemical sciences. One year \$8,910.

Carney Landis. Research Foundation for Mental Hygiene, Inc., New York State Psychiatric Institute. Sensory and motor tests of CNS efficiency. Three years. First year \$21,956.

Donald W. Lauer. Indiana University. Response variables in classical conditioning. Two years. First year \$8,760.

Nettie H. Ledwith. Pittsburgh Child Guidance Center. Rorschach responses of elementary school children. One year \$9,720.

Leslie Phillips. Clark University. The application of developmental theory to problems of social adaptation. Three years. First year \$16,102.

Carl R. Rogers. University of Chicago. The process and facilitation of personality change. Three years. First year \$40,000.

William L. Sawrey. University of Colorado School of Medicine. Role of psychological factors in production of gastric ulcers. Two years. First year \$8,817.

Eliot Stellar. The University of Pennsylvania. Experimental study of the behavior of the marmoset. Two years. First year \$4,644.

A conference honoring E. K. Strong, Jr., and having as its topic "The Counseling Use of the Strong Vocational Interest Blank," will be held in Minneapolis on February 7-9, 1955. The Office of the Dean of Students at the University of Minnesota is sponsoring this conference and will bring as speakers persons doing vocational interest research relevant for counseling. A detailed program and further information can be obtained from



the Student Counseling Bureau, University of Minnesota, Minneapolis 14, Minnesota.

The University of Minnesota Industrial Relations Center will celebrate its tenth anniversary during the academic year 1954-1955. First event on the anniversary schedule is an All-University convocation, October 14, followed by a luncheon, and IRC open house. Research affiliates of IRC will be honored in conjunction with the seventh annual labor conference February 17 and 18 and the thirteenth annual industrial relations conference April 4, 5, and 6. Celebration plans also include the publication of two bulletins, one describing the history of the center and the other summarizing the IRC decade's important research findings. Founded in February 1945, the center has served to integrate and coordinate the services of the faculty and facilities of the University in providing training and carrying on research in the field of industrial relations. Its facilities have been expanded from the original staff of two to a research and clerical staff of 30 persons. Research has been conducted in the areas of manpower mobility, post-retirement-age utilization of older employees, industrial communications and employee morale, management development, measurement of union member attitudes, and the professional development of industrial relations personnel. Present organization of the center includes laboratories

devoted to professional services, management development, manpower mobility and marketing, union services, triple audit research, employment communications, and engineering personnel research.

The first Northwest Institute on Serving the Needs of Our Aging Population will be held at the University of Washington on November 11, 12, and 13, 1954. Two nationally known speakers who will address the institute and be available as consultants are Wilma Donahue, director, Division of Gerontology, University of Michigan, and Clark Tibbitts, chairman, Committee on Aging and Geriatrics, U. S. Department of Health, Education, and Welfare.

Other experts in the fields of physical and mental health, employment and economic support, housing and living arrangements, education, recreation and leisure time activities, rehabilitation and home services will lecture, participate as panel members, and lead informal discussions. The registration fee will be \$5.00 for the three-day period. A one-day registration fee of \$3.00 is available for those who can only attend the first day, which will be an over-all survey of the many areas concerned with and for our aging population. For registration blanks write to Office of Short Courses and Conferences, University of Washington, Seattle 5, Washington.

#### APA Dues and Subscriptions for 1955

The APA dues bills and subscription order blanks were mailed in early October. APA members are reminded that the deadline for payment has been moved up to November 15. If you return your dues bill later than November 15, please add \$1.00 for the fee to cover special mailing of journals. A more detailed explanation of the reasons for this early deadline is given on the dues bill.

#### Deadline for Fellowship Application

Associate members who wish their applications for Fellow status considered at the next annual meeting, September 1955, must file one copy of the Uniform Fellow Blank for each Division through which they are applying with the APA Central Office by January 1, 1955. (This represents a change in deadline by vote of Council from October 1, 1954.) Copies of the blank should be obtained from the appropriate Division secretaries.



# Convention Calendar

**American Psychological Association:** September 2-7, 1955; San Francisco, California

*For information write to:*

Dr. Fillmore H. Sanford  
1333 Sixteenth Street N.W.  
Washington 6, D. C.

**Acoustical Society of America:** November 18-20, 1954; Austin, Texas

*For information write to:*

Dr. R. N. Lane  
University of Texas  
Austin, Texas

**American Vocational Association:** December 2-7, 1954; San Francisco, California

*For information write to:*

Dr. M. D. Mobley  
American Vocational Association  
1010 Vermont Avenue, N.W.  
Washington 5, D. C.

**Southwestern Psychological Association:** December 16-18, 1954; Oklahoma City, Oklahoma

*For information write to:*

Dr. Ernestine B. Blackwell  
Division of Mental Health  
State Department of Health  
Austin, Texas

**American Association for the Advancement of Science:** December 26-31, 1954; Berkeley, California

*For information write to:*

Dr. R. L. Taylor  
Associate Administrative Secretary  
1515 Massachusetts Avenue N.W.  
Washington 5, D. C.

**Gerontological Society:** December 28-30, 1954; Gainesville, Florida

*For information write to:*

Dr. N. W. Shock  
Baltimore City Hospitals  
Baltimore 24, Maryland

**American Anthropological Association:** December 28-30, 1954; Ann Arbor, Michigan

*For information write to:*

Dr. W. A. Lessa  
Department of Anthropology and Sociology  
University of California  
Los Angeles 24, California

**American Genetic Association:** January 13, 1955; Washington, D. C.

*For information write to:*

Managing Editor  
Journal of Heredity  
1507 M Street N.W.  
Washington 5, D. C.

**American Group Psychotherapy Association:** January 14-15, 1955; New York City

*For information write to:*

Mr. George Holland  
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